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MAMMALIA AND ORNITHOLOGY.

BY

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* Hind's Voyage, H. M. S. Sulphur.

† Gray, (G. R. G.) Voyage of H. M. S. Erebus and Terror.

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ZOOLOGY.

MAMMALIA.

ORDER QUADRUMANA.

FAMILY VESPERTILIONIDÆ.

In the course of a long and laborious voyage among the islands of the Pacific and Indian Oceans, we had frequent opportunities of becoming familiar with some of the bats belonging to the genus *Pteropus*. (*Roussettes* of the French naturalists.) In the Friendly, Feejee, and Samoan or Navigators' Islands, they are numerous: each group of islands having its peculiar species. Their spectral appearance is one of the characteristics in the wild and varied scenery; their strong odour taints the atmosphere of the otherwise fragrant forests, and will always be remembered by persons who have visited the interesting regions inhabited by these animals. The Pteropi are all more or less gregarious; most active in twilight: and when at *rest*, hang from the branches of trees with their heads downwards, using their wings as cloaks to shelter their bodies from the wind, rain, and sun; when they fly, as they have no interfemoral membranes, they hold the two hind feet together, which makes them appear to have a tail; they climb with great facility along the under side of the branches,

and are very destructive to both wild and cultivated fruits, as they taste and reject until the ripest and best is found; but we never heard them accused of destroying animal life. The Pteropi of Australia are migratory, being seen only in those seasons when peaches and other fruits are ripe and abundant; here we did not obtain specimens.

At Singapore we obtained some skins from the Malay peninsula, which are supposed to have belonged to *Pt. Javanicus* of Desmarest, or *Pt. edulis* of Cuvier; they have a very small false molar tooth in the upper jaw, which it seems has not been observed in the specimens from the island of Java. A specimen from that island was kept alive in the Philadelphia Museum for several years; it was perfectly tame and gentle towards persons it knew, but disliked strangers; it was fed during the voyage from Batavia to Philadelphia on boiled rice sweetened with sugar, and on its arrival at the Museum, eat every kind of fruit which happened to be in season; once in a while it was indulged in picking the bones of a boiled fowl, which it did with avidity. It was always most active in the morning and evening, and slept at noon and midnight; never resting in any other position than with its head downwards, and hanging by the hind feet.

PTEROPUS KERAUDRENIUS.

Roussette Kéraudren. Pteropus Keraudren. Quoy et Gaimard, Zool. Voy. autour du Monde, exécuté sur les Corvettes de l'Uranie et la Phisicienne, p. 51.

Pteropus Keraudrenius. Temminck. Monographies de Mammalogie, p. 186.

Collection Exp. Exp.

Dental formula: incisors, $\frac{4}{4}\frac{4}{4}$; canine, $\frac{2}{2}$; molars, $\frac{1}{1}\frac{0}{2} = 34$.

We found a species of Bat very common at the Feejee Islands, which agrees with the descriptions above quoted; the native name is "Beka," which is also the native name of a closely-allied species inhabiting the island of Tongatabu. These two have very distinct

specific characters, the Tonga bat* having a black head, the Feejee bat a gray head; the latter has also a conspicuous auxiliary molar tooth in the upper jaw, which in the Tonga bat is very minute. In habits, and strong odour, nearly all the species of this genus are alike: any of them may be discovered by the odour emitted as they hang pendant from the high branches of the trees in humid forests, this one included, although it is not thought to be so disagreeably strong as those from the island of Tongatabu.

PTEROPUS VOCIFERUS.—(Nob.)

Plate I.

Collection Exp. Exp.

P. capite, collo, corporeque molliter lanatis, rufo-brunneis, lateribus saturatissimis: dorso fusco-brunneo, pilis brevibus, rectis et compositis; medio alarum griseo, sanguinis venis obscurioribus et visu benè obviis: rostro longo, angusto; naribus bifurcatis: cavis genarum amplis: scroto non visibili: iride brunneâ. Mas.

Hair of the head, neck, and body, soft, woolly, and of a rufus-brown colour, darkest on the sides; back dark brown, the hair short, straight and smooth. Wings gray in the middle, the blood-vessels darker and distinctly visible; snout long, narrow, the nostrils bifurcated; cheek-pouches spacious; no visible scrotum; irides brown.

Total length, from the end of the nose to the anus, 8 inches; extent of the wings 34½ inches; forearm $4\frac{7}{10}$ inches; thumb, including the nail, $2\frac{3}{10}$ inches; nail $\frac{7}{10}$ inch; ear 1 inch long, $\frac{3}{4}$ inch wide. Male.

Dental formula: incisors, $\frac{4}{4}$; canine, $\frac{2}{2}$; molars, $\frac{1\,0}{1\,2} = 34$.

At the island of Mangsi, in the Straits of Balabac, our attention was arrested by the constant screams of this animal, which sounded like the distress-cry of the Norway rat, but louder, and soon led us to

* *Pteropus Tonganus*, *Roussette de Tonga*, Quoy et Gaimard, Zool. Voy. de l'Astrolabe, p. 74, pl. 8.

their diurnal resting-places, which were found to be amongst the lofty *roots* of a species of banyan, or fig tree, fifty feet from the ground; there, secreted in holes, and sometimes suspended, as they have been represented in our plate, they spend the day, not quietly, but in constant quarrels at the season we discovered them, which was in the month of February; and the strong odour emitted by them was quite perceptible to us when passing the trees which they frequented.

CRANIUM OF P. VOCIFERUS—NATURAL SIZE.

PTEROPUS SAMOËNSIS.—(Nob.)

Plate II.

Collection Exp. Exp.

P. capite brevi, robusto, fulvo: fronte griseâ: auribus parvis, rotundatis, nigris: collo seniorum rufescente; juniorum fulvo: corpore guttureque rubescenti-brunneis: pilis erectis et aliquantulùm lanatis, in dorso compositissimis: alarum membranâ nigrâ; iride brunneâ.

Head short, robust, tawny, the front gray; ears small, rounded, black; neck of the old animals rufus, in the younger animals tawny; body and throat reddish-brown; hair erect, and somewhat woolly, most smooth on the back; wing-membranes black; irides brown.

Total length 8 inches; extent of wings 38½ inches; forearm $5\frac{4}{10}$ inches; tibia $2\frac{7}{10}$ inches; thumb, including the nail, $1\frac{9}{10}$ inches; nail $\frac{7}{10}$ inch; ear $\frac{8}{10}$ inch long, $\frac{4}{5}$ inch wide: female; the males are larger.

This species was first discovered on the island of Tutuila, and subsequently on all the islands of the Samoan Group; we obtained

numerous specimens, and found the young animals somewhat lighter-coloured than the old ones, but in other respects there is but little variation in colour or size. It is the least gregarious, and most diurnal, in habits, of any of the genus which we saw; they are frequently abroad at noonday, and fly with the two hind feet together, which makes them appear to have tails. Some which were wounded, became quite tame in a short time, and would eat bread or fruit from the hand that offered it to them; but they were too offensively odorous to be tolerated as pets. They are very destructive to all kinds of fruit, and are usually silent when feeding, but if two covet the same vi, or banana, there is a grunting dispute for it; when wounded with shot, they utter loud screams.

CRANIUM—NATURAL SIZE.

DYSOPES AURISPINOSUS.—(Nob.)

Plate III. Fig. 1.

Collection Exp. Exp.

D. vellere denso, subtili, velvetino, sepiaco colore, subtùs dilutiore, cœruleo-nitente: auriculis alarumque membranis purpurescenti-nigris: quâque nari rotundâ et consignatâ disco separato anticè spinis corneis papilliformibus marginato: labiis magnis, foliatis vel admodum corrugatis: auribus magnis, deciduis, in fronte copulatis et ultra nasum sese extendentibus, sed facilè retrorsùm tortis inque flabelli formam collectis: margine verò anteriori retrorsùm plicato, ipsâ plicâ sex octove spinis corneis seriatim dispositis armatâ, numero spinarum inæquali in alterutrâ aure: trago parvo necnon et angulari: oculo parvo, nigro: alis longis, acuminatis: pollice in tria flexibilia diviso genicula: bracteâ

in primo articulo callosâ facilè suscipiente contra se aciem unguis: digito indice uni-geniculato, absque ungue: pedum posticorum digitis quinis æquè longis, unguibus et pollice albis; spinis plurimis albis recurvatisque digitos externos subtùs et in externo margine armantibus: digitorum omnium extremitate denso albarum setarum vallo, tres decimas pollicis partes longarum, instructâ: membranâ interfemorali nudâ, amplectente vix plus quàm dimidium caudæ, nudâ solutâque pelle contectæ: linguâ angustâ, supernè lævigatà, margine papillari et rotundato apice.

Fur dense, fine and velvety, and of a sepia-brown colour, lighter beneath, and having a blue gloss; ears, and wing-membranes of a purplish-black colour; nostrils round, each situated in a separate disk, which is margined anteriorly with papilliform corneous spines; lips large, foliate, or much corrugated: ears large, drooping, joined together on the forehead, and projecting beyond the nose, but capable of being folded backwards and together, like a fan; anterior margin turned backwards, and on the fold there is a row of six or eight corneous spines (the number not being equal on the two ears): tragus small and angular; eye small, black; wings long, pointed; thumb with three flexible joints, a callous plate on the first can be opposed to the terminal nail; hind feet with five toes of equal length, the claws of which, as well as the thumb, are white; outer toes armed beneath, and on the outer edge with numerous recurved white spines; all the toes terminated with a cluster of recurved white bristles, three-tenths of an inch long; interfemoral membrane naked, and including but little more than half the tail, which is covered by a loose naked skin; tongue narrow, smooth on the top, with a papillary margin, and rounded tip.

Total length $4\frac{1}{2}$ inches; extent of the wings $14\frac{1}{2}$ inches; tail $1\frac{8}{10}$ inches, extending $1\frac{1}{10}$ inches beyond the interfemoral membrane.

Dental formula: incisors, $\frac{2}{4}$; canines, $\frac{1}{1}\frac{1}{1}$; molars, $\frac{5}{5}\frac{5}{5} = 30$.

This remarkable bat flew on board the U. S. Ship Peacock, off the coast of Brazil, on the 18th of November, when the ship was about one hundred miles from land, south of Cape St. Roque. When caught, it did not utter any audible sound, but was violent in defending itself at first; soon, however, it became sufficiently tame to allow

itself to be handled, provided no violence was offered; at night it became much more active than it was during the day, and uttered a single, sharp, impatient squeak, whenever it found that it could not escape from the cage.

VESPERTILIO CALIFORNICUS.

Californian Bat. *Vespertilio Californicus*. Bachman, Journal of the Acad. Nat. Sciences. Philadelphia, vol. viii. p. 285.

Collection Exp. Exp.

This bat was found in every part of Oregon visited by the Expedition; and also at the Bay of San Francisco in California. All our specimens are larger than that described in the Journal of the Academy; the smallest exceed it by about half an inch in the extent of its wings.

VESPERTILIO SEMICAUDATUS.—(Nob.)

PLATE III. FIG. II.

Collection Exp. Exp.

V. pilis mollibus, rectis, obscurè fuligineo-brunneis supernè, infernè dilutioribus: alis longis, angustis, diluto-brunneis: digito indice unigeniculato: pollicari ungue brevi, nonnisi modicè hamato: membranâ interfemorali magnâ, nudatâ; caudâ ad ejus semilongitudinem pertingente: extremitate caudæ avulsâ ab eadem membranâ, in ejusque supernâ parte extensâ, acuminatâ: cruribus posticis longis, gracilibus; pedibus antrorsùm conversis: rostro magno, obtuso: naribus rotundis, intervallo exiguo a se dissitis: labiis mediocribus, ad instar caninorum pendulis: oculis parvis, nigris: auribus angustis, erectis, modicè rotundatis: trago brevi, ad apicem explicato et rotundo. Mas.

Hair soft, straight, dark fuliginous-brown above, lighter beneath; wings long, narrow, and of a light-brown colour; index finger single jointed; the claw of the thumb short and slightly hooked; interfemoral membrane large and naked; tail reaching but half its

length; extremity of the tail detached from the interfemoral membrane, projecting over its upper surface, and pointed; hind legs long, slender; the feet turned forward; muzzle large, and blunt; the nostrils round and slightly divided; lips moderate, pendant like a dog's; eyes small, black; ears narrow, erect, and slightly rounded, the tragus short, expanded and round at the extremity.

Length of head and body $1\frac{6}{10}$ inches; extent of the wings $10\frac{4}{10}$ inches; tail $\frac{6}{10}$ inch; interfemoral membrane beyond the tail $\frac{8}{10}$ inch; ear $\frac{4}{10}$ inch; tragus $\frac{1}{10}$ inch. Male.

Dental formula: incisors, $\frac{2\,2}{6}$; canine, $\frac{2\,2}{1\,1}$; molars, $\frac{3\,3}{5\,5} = 32$.

The second pair of canine teeth placed in our formula, would be more properly arranged as false molars, but their size and form are so nearly the same with the true canine teeth, that the above arrangement is preferred as being the most characteristic; all the six teeth arranged as canine, are bituberculate.

This species was found at the Samoan Islands, and at Upolu was not uncommon.

As most of the animals of this family fly at night, or in the dusk of the evening, a traveller has difficulty in obtaining specimens of the smaller species; he may watch for, and shoot them, but should they fall amongst bushes or grass, it is questionable whether he will find them. The two following species were lost under the above circumstances; and are now noticed, merely to call the attention of the naturalist to the fact, that such animals were seen in regions where they have not been heretofore noticed.

At "Kaa-la-kea-kua," on the island of Hawai, memorable as the place where the renowned circumnavigator Cook perished, a species of bat which we believe new to naturalists, was quite common: it measures about twelve inches across the wings; is of a ferruginous gray colour; the interfemoral membrane is large, and includes the tail, which is about the length of the body: it has the general aspect and colour of *Vespertilio Noveboracensis*, but is larger.

At the Bay of Islands, New Zealand, we frequently saw a small black bat, measuring about eight inches across the wings, but did not succeed in obtaining specimens; it was insectivorous, and probably belonged to the genus Vespertilio, as now restricted.

FERÆ.

VULPES VIRGINIANUS.—(Gm.)

Vulpes Virginianus. Gray Fox. Richardson, Fauna Boreali-Americana, vol. i. p. 96.

Gray Fox. *Canis cinereo-argentatus.* Godman's American Nat. Hist., vol. i. p. 280.

Collection Exp. Exp.

This animal was obtained at Puget's Sound, in Oregon, and was observed several times in the forests which lay in our route to California, but never in the prairie country.

VULPES VELOX.—(Say.)

Swift Fox. *Canis velox,* Say. Long's Expedition to the Rocky Mountains, vol. i. p. 486.

Burrowing Fox. Lewis and Clarke. Journey to the Pacific Ocean, vol. ii. p. 351.

Canis (Vulpes) cinereo-argentatus. The Kit Fox. Richardson, Fauna Boreali-Americana, vol. i. p. 98.

At Fort Vancouver, on the Columbia River, we saw the skins of this animal, which were there considered uncommon. Farther south, on our journey to California, we had several opportunities of seeing them, and their burrows, which are always in the prairies, and never in the forest, or "brush," like those of the preceding, or Gray Fox.

CANIS LATRANS.

Prairie Wolf. Lewis and Clarke. Travels to the Pacific Ocean, in 1804, 5, and 6.

Canis latrans, Say. Long's Expedition to the Rocky Mountains.
Canis latrans. The Prairie Wolf. Richardson, Fauna Boreali-Americana, vol. i. p. 73, pl. 4.
The Caygotte. *Lyciscus Cagottis?* Smith. Naturalist's Library.
Cuyota, Belcher.
Cayote of the Californians.

Collection Exp. Exp.

In Oregon, we saw this wolf wherever the country partook of a "prairie" character; or in other words, where the forests were not extensive; but they are not as abundant there, as in the "Buffalo country," east of the Rocky Mountains. As we journeyed south into California, following the waters of the Sacramento River, we found them to increase in numbers proportioned to the larger game. In California, thousands of cattle are annually slaughtered for their skins and tallow only; their bodies are left for the vultures and cayotes, (alias Prairie Wolves,) and as a consequence of food in plenty, with but trifling molestation, these wolves have multiplied and become very bold thieves. They frequently entered our camp in the night, and stole venison, geese, or whatever food was left within their reach: on one occasion they carried off a grisly bear's skin from the door of a tent, in front of a fire. They are very cowardly, always run from dogs; few, however, of which will attack them. The dogs will chase until the wolf turns at "bay," then the dog is sure to see something in the distance, but in a different direction from the wolf, at which he barks most courageously until the wolf has moved off.

The Prairie Wolf varies greatly, both in size and colour, but its jackal-like voice—half bark—half howl,—sometimes approaching a scream, is so different from that of the rest of the North American wolves, that most persons will recognise it as the same, whether heard on the plains of the Missouri, or the pastures of California.

LUPUS OCCIDENTALIS.

Plate IV.

Canis lupus occidentalis. Richardson, Fauna Boreali-Americana, vol. i. p. 60.

Lupus occidentalis. Nat. History State of New York, pt. i. p. 42.

Collection Exp. Exp.

The size is greater than that of the Pyrenean Wolf, which it resembles. General colour brown; fur beneath the hair cinereous. Nose, back of the ears, front of the legs, and sides of the tail, ferruginous; throat and abdomen cinereous; cheeks light yellowish-gray; forehead darker gray, the hairs black, with a white bar nearest the roots; nape pale ferruginous gray; hairs of the back white one-third their length from the roots, the rest black with an obscure fulvous bar: tail very dark above, and black at the tip; ferruginous beneath; paler on the sides; terminal hairs white at the roots, the rest glossy black. Fore legs tawny, in front ferruginous, with a narrow black line; under part of the feet and claws blue-black; the nails short, and but slightly bent. Hind legs and feet less robust; the flanks ferruginous; whiskers sparse, black. Ears lined with cinereous hair. Teeth large and strong; the four middle incisors of the upper jaw *trilobate;* four outer incisors of lower jaw *bilobate.*

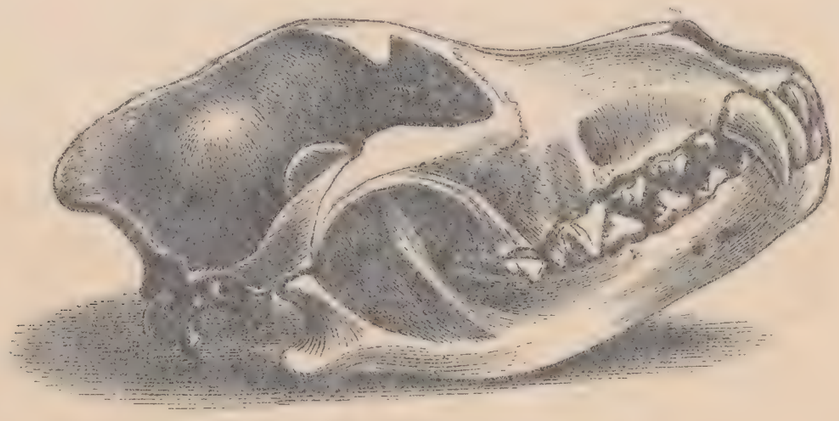
Total length (dried skin) 5 feet 2 inches; tail 1 foot 8 inches; from the end of the nose to the eye $4\frac{3}{4}$ inches; nose to ear $9\frac{1}{2}$ inches; ear $4\frac{1}{2}$ inches; terminal hairs of the tail 5 inches; claws of the fore feet $\frac{9}{10}$ inch; spurious (thumb) nail, more curved, $\frac{8}{10}$ inch; claws of the hind feet 1 inch; between the front angles of the ears $3\frac{1}{2}$ inches; upper canine teeth $1\frac{2}{10}$ inches; lower canine teeth 1 inch.

The Brown Wolf of North America inhabits all the temperate regions of the continent which are covered with forests, but is seldom, if ever, seen on the prairies. Mountains covered with close thickets of laurels, (Kalmia and Rhododendron,) and retired streams, with banks shaded by the sombre hemlock, afford them secure retreat; in such places their nocturnal howl may be heard, though the animals are seldom seen, as they sally forth to hunt in the night only, or very rarely in the day; then the deer started in the mountains rush for protection to the nearest stream of water, where the horns, and a few other fragments of the victim, will perhaps betray to the wandering hunter, the cause of bloody revelry, and of the previous midnight howling. It is only when deer and other wild animals become scarce, that the brown wolves attack the sheep, calves and hogs, of the settler; the cow-bell, and other sounds from the farm-yard, the cry of

hounds, and now and then the report of a rifle, are at all other times a sufficient protection against this cowardly marauder. On one or two occasions only, we have known them to attack hounds, while deer-hunting on the upper branches of the Susquehanna River, in Pennsylvania.

The drawing for Plate IV. was taken from a specimen obtained at Puget Sound, Oregon. It had killed a calf by a single bite, which divided its spine; the wolf was subsequently poisoned with strychnia, on its return to devour the victim. Figure 2 on the same plate, was drawn from a living animal, taken when young in North Carolina; both specimens were of about the same size, and notwithstanding the wide difference in locality, (the entire continent of North America, from northwest to southeast,) few persons we believe could distinguish one from the other.

The name which Dr. Richardson has suggested as general for the wolves of North America, we have applied to this one in particular, which is considered the most characteristic species, because the least variable of any on our continent, and as they are distinct from those of the north, being found in the temperate parts of this country only, there is less probability of its being identical with the wolf of Europe.



LUPUS OCCIDENTALIS—CRANIUM.

URSUS FEROX.

Grisly Bear. *Ursus ferox.* Lewis and Clarke's Expedition to the Pacific Ocean.

Ursus horribilis. Ord. Say, in Long's Expedition to the Rocky Mountains, vol. ii. p. 244.

Ursus ferox. Grisly Bear. Richardson, Fauna Boreali-Americana, vol. i. p. 24, pl. 1.

Collection Exp. Exp.

It is curious that this animal should not be found on the Columbia River, near its mouth. In our journey south through Oregon, the first seen were on the Umpqua River; from whence, as we continued on, they seemed to increase in numbers, until we arrived in California; six were killed in one day by our hunters as we descended the Sacramento River, although the meat was not wanted. This destruction arose from a dislike to the animal, justly considered the most dangerous on the continent, elk, deer, and antelopes being there plentiful, and affording much better food, unless they be very fat, which was not then the case.

The principal food of the Grisly Bears in California, is acorns, which are abundant and appear to be very nutritious; the Indians subsisting in a great measure on the same kind of food. Both Indians and bears ascend the trees to thrash down the acorns, which is about as effectually done by the bears, as by the Indians. From the accounts of previous travellers, it was supposed that the Grisly Bear could not climb; they will not perhaps attack a person who has retreated for safety up a tree, but they certainly do climb sometimes, and shake the acorns very effectually from the trees, as we had frequent opportunities of witnessing the traces of destruction left; and there is little difficulty in distinguishing their tracks from those of the Black Bear, (Ursus Americanus,) which are said to inhabit the same country.

SCALOPS TOWNSENDII.

Scalops Townsendii. Bachman. Journal of the Academy of Nat. Sciences, Philadelphia, vol. viii. p. 58.

Collection Exp. Exp.

The provisions furnished to our party travelling from Oregon to California, consisted in part of peas and tallow; the peas were carried in bags, which were suffered to lie on the ground when we encamped, and were sometimes discovered by the "Ground Moles," which were so eager to devour them, that they were easily captured, and proved to be this species. They form long burrows near the surface of the ground, similar to those of the *mole* (Scalops Canadensis) of the eastern portion of our continent. Two specimens were retained, one taken on the Columbia, the other on the Willamette River; they are both less in size than Dr. Bachman's specimen, and of a lighter shade, being captured in August, and in summer fur, which will probably account for the difference in colour.

HALICHŒRUS ANTARCTICUS.

Plate V.

Collection Exp. Exp.

Molares quatuor posteriores utriusque maxillæ bi-radicati; corollis multilobis: laniarii validi, incurvi, mediocri longitudine, intùs canaliculati: primores breves, simplices, incurvi.

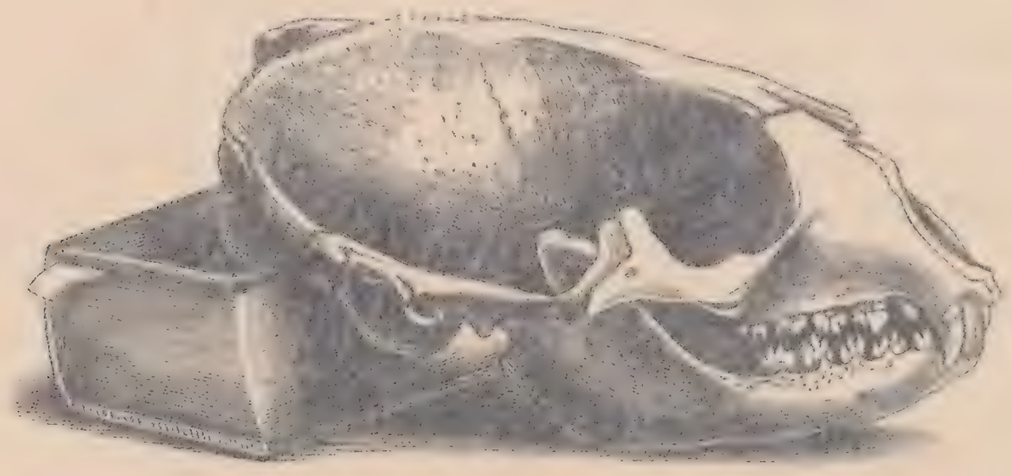
H. formâ generali corporis brevi, distentâ: pedibus anticis perbrevibus, subtùs pilosis; quinis unguibus longitudine et densitate ferè æqualibus, nonnisi aliquantùm uncinatis, ultra membranam intercarpii protentis: pedibus posterioribus, dum extenduntur, formæ triangularis; unguibus longis, planis, rectis, medio inter omnes minore; extimis majoribus et magnitudine pœnè paribus; omnibus ultra intertarsii membranas projectis: caudâ brevi, complanatâ, permodicè ad apicem acuminatâ: naso pilis contecto, exiguo, excepto spatio inter nares in rostri fronte sitas, lineares: mystacibus cum cirro setoso qui supra supercilia jacet, magnis, complanatis, ad margines undulatis, pallescentibus albisve: pilis validissimis, maximè confertis planisque, summitatibus antrorsùm incumbentibus, quando sint aridi, unde velvetinam speciem pellis præ se fert.

Four posterior molar teeth in both jaws double-rooted, their crowns many-lobed; canine teeth stout, curved, of a moderate length, and channelled on the inside; cutting teeth short, simple, and curved. The general form of the body short and full; the fore feet very short, covered with hair beneath, the five claws nearly equal in length and thickness, but slightly curved, and reaching beyond the intercarpal membrane; hind feet triangular in form when expanded; the nails long, flat, and straight; the middle one of the five smallest, the outer ones largest, and nearly equal in size; all reach beyond the intertarsal membranes; tail flat, short, and round, with but a slight point at the extremity; nose covered with hair, excepting a very small spot between the nostrils, which are situated in front of the snout, and are linear in form; whiskers, and tuft of bristles above the brow, large, flattened, undulated on the edges, and of a pale yellow colour, or white. Hair very stout, close set, and flat; the points curve forward when dry, and give the skin a velvety appearance.

Length from the nose to the end of the tail 4 feet; hind toes reaching $3\frac{3}{4}$ inches beyond; fore leg, measured along the front, $4\frac{3}{10}$ inches; nails $1\frac{2}{10}$ inches; hind feet, measured from the body, 6 inches; outer nails $1\frac{1}{10}$ inches; middle nails $\frac{7}{8}$ inch; whiskers $4\frac{1}{2}$ inches; eyebrow $2\frac{4}{10}$ inches.

Dental formula: incisors, $\frac{6}{4}$; canine, $\frac{1}{1}\frac{1}{1}$; molars, $\frac{5}{5}\frac{5}{5} = 34$.

This species inhabits the Antarctic Sea. The specimen was obtained on the 10th of March, at Deception Island. It appears from the teeth, to be an adult, and is the most perfect specimen brought home by the Expedition.



HALICEPUS ANTARCTICA.—CRANIUM.

CETACEA.

PHOCÆNA PECTORALIS.

PLATE VI. FIG. 1.

P. cæruleo-nigra: guttulâ albâ utrinque ante pinnas pectoris: fasciâ frontali pallidè ardesiacâ breviter pone oculos discurrente: ano abdomineque pallidè rubescenti-albis: labiis rubido-albo marginatis.

Colour blue-black; a white spot on each side of the breast in front of the pectoral fins; a frontal band of light slate-colour extends a short distance behind the eyes; vent and abdomen light reddish-white; lips margined with reddish-white.

Total length 8 feet 8 inches; greatest diameter 21 inches; dorsal fin, measured along the front edge, 14 inches; pectoral fin 16 inches; tail $25\frac{1}{2}$ inches in diameter; from the end of the snout to the corner of the mouth $11\frac{1}{2}$ inches; eye from the end of the snout 13 inches.

Dental formula: $\frac{2}{2}\frac{3?}{3}\ \frac{2}{2}\frac{3?}{3} = 92$.

Sixty of these animals were driven on shore by the natives at Hilo Bay, island of Hawaii, at one time. They were considered dainty food, and yielded a valuable stock of oil. Only one lower jaw was saved as a specimen; it is more rounded than usual at the extremity; the teeth are stout, project outwards, and are worn nearly even with the gums; showing that our specimen was an old animal, and probably of the maximum size.

PHOCÆNA AUSTRALIS.

PLATE VI. FIG. 2.

P. rostro, dorso, pinnisque omnibus ardesiaco-nigris: lateribus dilutioribus griseisve: lineâ albâ ex adverso marginis posterioris pinnæ dorsalis per latera ad caudam usque tendente: albo colore partium infrà jacentium per undulatam lineam griseis lateribus conjuncto.

Snout, back, and all the fins, dark slate-colour; sides paler, or gray; a white lateral line commences opposite the posterior edge of the dorsal fin, and reaches the tail; beneath white, which joins the gray of the sides by an undulated line.

Total length 7 feet; greater diameter, opposite the dorsal fin, 18 inches; pectoral fin 16 inches; dorsal fin 17 inches; across the tail 20 inches.

Dental formula: $\frac{3}{2}\frac{1}{9}\ \frac{3}{2}\frac{1}{9} = 120$.

Harpooned in the South Atlantic Ocean, off the coast of Patagonia, on the 12th of February.

DELPHINUS ALBIMANUS.

PLATE VII. FIG. 1.

D. rostro, capite, dorso, caudâ pinnâque dorsali cæruleo-nigris: ventre pinnâque pectoralialbis: lateribus fulvescentibus: oculo parvo, brunneo, quem circumdat niger annulus ad nigram rostri plagam pertingens: corpore dorsales pinnas inter et caudam perquàm compresso.

Snout, head, back, tail, and dorsal fin, blue-black; belly and pectoral fin white; sides pale tawny; eye small, brown, and surrounded with a black ring which joins the black of the snout; body, between the dorsal fin and tail, very much compressed.

Total length 6 feet 6 inches; snout $5\frac{3}{4}$ inches; dorsal fin, measured along the front edge, $9\frac{1}{2}$ inches; along the posterior margin, 9 inches; tail 6 inches long, $16\frac{1}{2}$ wide; pectoral fin $11\frac{1}{2}$ inches long, 4 inches wide; from the end of the snout to the eye 12 inches; body, six inches above the tail, where most compressed, $1\frac{1}{2}$ inches wide; circumference in front of the dorsal fin, $40\frac{1}{2}$ inches.

Dental formula: $\frac{43}{47}\ \frac{43}{47} = 180$.

Weight estimated to be 150 pounds.

The specimen was a female; its uterus contained a single fœtus, which was a male, of a reddish flesh-colour, and about nine inches long. The stomach contained fragments of cephalopode mollusca only. It was harpooned from the bows of the U. S. Ship Peacock, on the coast of Chili, latitude 27° 16′ S., and longitude 75° 30′ W., on the 12th of June.

DELPHINUS ALBIROSTRATUS.

PLATE VII. FIG. 2.

D. formâ elongatâ, pinnâ dorsali capiti proximâ: colore corporis saturatè cæruleo-griseo; pinnis dorsoque ferè nigris: oris angulo per nigram lineam pectoris pinnis connexo: fronte lateribusque obscuro-griseis, maculis albis vermicularibus obsitis: rostri apice albo: labiorum commissurâ flavidâ.

Form elongate, the dorsal fin being nearest the head; colour dark blue-gray, the fins and back nearly black; a dark line connects the corners of the mouth with the pectoral fins; front and sides dark gray, covered with small vermicular white spots; end of the snout white; commissure of the lips pale yellow.

Total length 6 feet $7\frac{1}{2}$ inches; perpendicular diameter at the dorsal fin 13 inches.

Dental formula: $\frac{40}{40?}\ \frac{40}{40?} = 160$.

Taken in the Pacific Ocean; latitude 2° 47′ 5″ S., longitude 174° 13′ W. of Greenwich, on the 22d of August.

DELPHINUS LATERALIS.

PLATE VIII. FIG. 1.

D. formâ crassâ: rostro parvo: corpore post dorsi pinnam admodùm compresso: colore pallidè purpuraceo-griseo, subtùs albo: lineâ per latus obscurâ maculis marginatâ partium corporis quæ infrà et suprà sunt colores dispescente; alterâ dilutiore divulsâ ab laterali lineâ contra pinnam pectoralem deorsùm retrorsùmque discurrente; tertiâ oculum cum pectoris pinnâ connectente: rostro nigro: pinnis concoloribus.

Form thick; snout small; body much compressed behind the dorsal fin; colour light purplish-gray; beneath white; a dark lateral line, edged with spots, separates the colours of the upper and under parts of the body; a separate line, paler in colour, branches from the lateral line opposite the pectoral fins, and passes downwards, and backwards; another connects the eyes and pectoral fins; snout black; fins black.

Total length, 7 feet 6 inches.

Dental formula: $\frac{4}{4}\frac{1}{1?}$, $\frac{4}{4}\frac{1}{1?}$ = 164.

It was caught on the 13th of September, in the Pacific Ocean; latitude 13° 58′ N., longitude 161° 22′ W.

DELPHINAPTERUS BOREALIS.

PLATE VIII. FIG. 2.

D. formâ elongatâ: rostro aliquantulùm protruso: colore atrato: maculâ lanceolato-albâ in pectore, quæ per angustam vittam ad caudam usque excurrit.

Form elongate; snout slightly protruding; colour black, with a white lanceolate spot on the breast, which is extended in a narrow line to the tail.

Length, 4 feet.

While in the water it appears to be entirely black, the white line being invisible. They are remarkably quick and lively in their motions, frequently leap entirely out of the water, and from their not having a dorsal fin, are sometimes mistaken for seals.

Specimens were taken in the North Pacific Ocean, latitude 46° 6′ 50″, longitude 134° 5′ W. from Greenwich. Great quantities of a species of Anatifa were floating on the surface of the sea, on which they were probably feeding. Two, which had been struck and badly wounded by the harpoon, escaped; the rest did not leave the ship, as the Delphini usually do when one of their number is wounded.

UNGULATA.

AMERICAN ELK. CERVUS CANADENSIS.—(Briss.)

Cervus strongyloceros. (Schreber.) The Wapiti. Richardson, Fauna Boreali-Americana, vol. i. p. 251.

Dental formula: incisors, $\frac{0}{8}$; canine, $\frac{1}{0}\frac{1}{0}$; molars, $\frac{6}{6}\frac{6}{6} = 34$.

"Wapiti," "Wawaskiss," "Waskeesews," "Wawaskeeshoo," and as many other Indian names are applied to this animal, as there are tribes of Indians speaking different dialects of language, in the wide belt of country inhabited by it. Elk is the name universally adopted by all who speak the English language in the same districts; where the Moose, (*Cervus alces*, L.,) known by the name of Elk in northern Europe, is seldom, if ever, found.

They still exist on the upper branches of the Susquehanna River, and thence westwardly may occasionally be found in all favourable situations, in greater or less numbers, to the Pacific Ocean. Those observed by the members of the Expedition on the mountains south of the Columbia River, were of unusual size, and in considerable numbers.

In California they are very abundant, and commonly frequent the plains, as they do on the upper parts of the Missouri River; these animals are not generally as large as those inhabiting the mountain districts, but we can find no specific character to separate one from the other. They all have the same strong, blunt, canine teeth in the upper jaw only, light-coloured rumps, short tails, &c. They go in larger herds than any other deer in America, excepting perhaps the *Caribou* (*Cervus terandus*, L.,) and notwithstanding the specific name Canadensis, must not be considered a northern species.

CERVUS VIRGINIANUS.—(Gm.)

Common Deer of the Anglo-Americans.

White-tailed Deer of the same, in the countries inhabited by the two following species, or Black-tailed Deer.

Cervus leucurus, (Douglas.) Long-tailed Deer. Richardson, Fauna Boreali-Americana, vol. i. p. 258.

Dental formula: incisors, $\frac{0}{8}$; canine, $\frac{0\,0}{0\,0}$; molars, $\frac{6\,6}{6\,6} = 32$.

Numbers of Deer were seen, and killed at different times by the members of the Expedition, while in Oregon; they were found to be most numerous near the coast of the Pacific Ocean. Their range on that coast is up to the fiftieth degree of latitude, and probably much further north. At the Umpqua River, in latitude 43°, they give place to the Black-tailed Deer, (*Cervus Lewisii*,) our next species, which occupy the country south of that parallel to the almost entire exclusion of these.

We believe that the same species of deer inhabits all the *timbered*, or partially timbered country, between the coasts of the Atlantic and Pacific Oceans; they vary in size, as all the animals of this genus do, in different feeding grounds, but they are specifically the same. The names of animals, unless they have some peculiarities of voice, vary among different tribes of Indians, as among white people; but it is curious, the "sign" for this species is everywhere the same, and equally understood by the Indians of Maine, Florida, and Oregon. It is founded on one of its characteristic actions: when alarmed, this species always erect their tails, which, being white beneath, are conspicuous objects; and when running, the tail is still kept erect, and wagged from side to side. Hence the sign made by all the Indians who cannot express themselves by words, is to raise the finger or hand to a perpendicular position, and wag it from side to side; a coincidence observed in Maine and Florida on the east, and on the coast of the Pacific Ocean on the west.

CERVUS LEWISII.

Plate IX.

Black-tailed Deer. Anglo-Americans in Oregon.
Black-tailed Fallow Deer. Lewis and Clarke. Travels to the Pacific Ocean, vol. iii. pp. 26, 125, London edition.
Cervus macrotis, var. *β*. Columbiana. Richardson, Fauna Boreali-Americana, vol. i. p. 257.

Collection Exp. Exp.

C. cornibus formâ ad instar C. Virginiani, sed exilioribus et generatim absque ramulis basalibus: formâ generali rotundatâ et compactâ: pilis Octobris mense flavescenti-brunneis, infrà dilutioribus, haud complanatis, aliquantùm utique undulatis: vittâ nigrâ vel saturatè brunneâ obsidente rostrum imamque mandibulam: mento, ventre et parte crurium posticâ flavescenti-albis: lineâ obscurâ medium transcurrente pectus: caudâ recurvâ, omni anni tempestate pilosâ, ad apicem flocco ornatâ: nigro colore suprà, infrà flavescenti-albo: pedibus dilutè aurantio-brunneis: unguibus cœruleo-corneis, angustis et exiguis.

Horns shaped like those of Cervus Virginianus, but more slender, and commonly without the basal antler; general form rounded and compact; colour of the hair (in October) yellowish-brown, lighter beneath, not flattened, but slightly undulating; a black, or dark brown band encircling the nose and under jaw; chin, belly, and inside of the legs, yellowish-white; a dark line along the middle of the breast; tail curved, covered with hair at all seasons; tufted towards the extremity, black above, and yellowish-white beneath. Feet pale "raw sienna" coloured; hoofs bluish horn-colour, narrow and small.

Dental formula: incisors, $\frac{0}{8}$; canine, $\frac{0\,0}{0\,0}$; molars, $\frac{6\,6}{6\,6} = 32$.

Specimen killed on Feather River, Upper California: total length, including the tail, 6 feet $1\frac{1}{2}$ inch; tail 10 inches; height, at the shoulder, 3 feet 2 inches; at the rump, 3 feet 3 inches; from the shoulder to the tail, 3 feet 6 inches; from the lower jaw to the shoulder, 1 foot 1 inch; ear, length, 10 inches; width, $3\frac{3}{4}$ inches; circumference of the neck, 1 foot; of the chest, 3 feet 8 inches; nose to occiput, $12\frac{3}{4}$ inches; nose to the horns, 9 inches; to the eye, 7 inches; lachrymal sinus, in length, 1 inch, in depth, $\frac{7}{8}$ inch.

This specimen was of full size, but had small horns, and one basal antler on the right side, which was about three inches long, situated inside, and directed upwards, and backwards. The skin was lost in descending the Sacramento River.

Specimen killed at the Bay of San Francisco: horns, two-pronged, separated at the base, 2 inches; at the points, $8\frac{1}{4}$ inches; length by the curve, $15\frac{1}{2}$ inches; first antler, 9 inches; second, $2\frac{1}{4}$ inches; fore hoof, in length, $2\frac{1}{2}$ inches; width, $1\frac{4}{5}$ inch; hind hoof, in length, $2\frac{1}{2}$ inches; width, $1\frac{4}{5}$; spurious hoofs, fore feet, 1 inch; in width, $\frac{3}{4}$ inch; spurious hoofs, hind feet, $\frac{7}{8}$ inch; in width, $\frac{3}{4}$ inch.

They have a glandular sac about one and a quarter inch long, opening on the outside of the hind legs, half way between the os calcis and spurious hoofs, similar to that in Cervus Virginianus.

This deer was first seen and described by our adventurous countrymen, Captains Lewis and Clarke, whose description, published in their Journal in the year 1807, is so accurate, that we subjoin it entire, adding only the scientific names of the other species with which they compared it.

"The black-tailed fallow deer are peculiar to this coast, and are a distinct species, partaking equally of the qualities of the mule (*Cervus macrotis*), and the common deer (*C. Virginianus*). Their ears are longer than those of the common deer. The receptacle of the eye is more conspicuous, their legs shorter, and their bodies thicker and larger. The tail of the same length with that of the common deer, the hair on the under side is white, and on its sides and top of a deep jetty black; the hams resembling in form and colour those of the mule deer, which it likewise resembles in gait. The black-tailed deer never runs at full speed, but bounds with every foot from the ground at the same time, like the mule deer. He sometimes inhabits the woodlands, but more often the prairies and open grounds. It may generally be said that he is of a size larger than the common deer,

and less than the mule deer. The flesh is seldom fat, and in flavour is far inferior to any other of the species."*

We propose the name *Lewisii*, from the conviction that the above description, written forty years since on the Columbia River, was intended for the animal now before us. In courtesy we should have called it *Columbiana*, as suggested by Dr. Richardson, in his Fauna Boreali-Americana, but that name would imply locality, and he has not chosen a correct one.

The geographic range of this species, by our own observations, appears to be limited on the north by the Columbia River, where a few are sometimes found; south of the Umpqua River, they occupy the country to the entire exclusion of the Virginia Deer. They are seldom seen east of the Cascade range of mountains, and abound in California.

The Black-tailed Deer never carries its tail erect when running, and viewed from behind, shows two narrow white lines of hair instead of the large, white, and elevated tail of the Virginia Deer, seen in the same position. When on the prairies, in long grass, they have a habit which is somewhat peculiar,—that of frequently springing up to a considerable height to get sight of their pursuers. Most of the bucks killed in the mountainous regions of the southern part of Oregon, had a basal antler on the inner side of the horns, which was directed upwards and backwards; those killed on the plains in California seldom had it.

CERVUS MACROTIS.

Plate X.

Mule Deer. Anglo-Americans of the Rocky Mountains.
Cervus macrotis. Say. Long's Expedition to the Rocky Mountains, vol. ii. p. 88.

* Travels to the Source of the Missouri River, and across the Continent to the Pacific Ocean, by Captains Lewis and Clarke, p. 463, 4to. ed. London, 1814.

Rather larger than Cervus Virginianus, and having more of the general aspect of C. Canadensis; destitute of the black submaxillary marks which are always conspicuous in C. Lewisii and Virginianus; horns larger, and more spreading, but having the points turned forward in the same manner; snout more arched, and the lachrymal opening larger; hoofs rounded, the under surface concave; tail pale ferruginous above, destitute of hair beneath, and having a tuft of black hair at the extremity. Colour pale ferruginous; darkest on the back, lighter beneath; chin, throat, inside of the thighs, and belly, dirty white; hair flattened, and undulating; eyelashes and whiskers black; irides dark-brown; pupils blue-black, and horizontally linear; ears large, almost naked, dark-coloured externally, and lined with scattered white hairs internally.

Total length, 5 feet 7 inches; tail, $7\frac{1}{2}$ inches; black tuft, $5\frac{1}{2}$ inches; height at the shoulder, 3 feet; at the rump, 3 feet 4 inches; circumference, breast, 3 feet 3 inches; abdomen, 3 feet 9 inches; space between the horns, $2\frac{3}{10}$ inches; length of horns by the curve, 1 foot $4\frac{1}{2}$ inches; lachrymal opening, 1 inch; ear, in length, 10 inches, width, 4 inches; from the base of the ear to the shoulder, 1 foot; fore leg, from the carpal joint to the point of the hoof, 1 foot 1 inch; hoof, $1\frac{6}{10}$ inch; measured along the commissure beneath, $2\frac{1}{2}$ inches; in width, 2 inches; hind foot, from the os calcis to the tip of the hoof, 1 foot $6\frac{1}{2}$ inches; hoof, $1\frac{7}{10}$ inch; along the commissure beneath, $2\frac{1}{2}$ inches; width, $1\frac{6}{10}$ inch; spurious hoofs, $\frac{8}{10}$ inch; width, $\frac{9}{10}$ inch.

Dental formula: incisors, $\frac{0}{8}$; canine, $\frac{0\,0}{0\,0}$; molars, $\frac{6\,6}{6\,6} = 32$.

The specimen from which our description was taken, was killed on the 1st of August, and is consequently in summer hair: the horns were not full grown, but are carefully delineated in our plate, and will give a correct idea of their appearance when covered with "velvet,"—a term used by the hunters to express the nature of the short hair which covers the horns of deer when they are growing. It is the same specimen described by Mr. Say; and the drawing for Plate X. is finished from a sketch made on the spot; the landscape and background of the plate being sketched at the same time, are given as characteristic of the country generally inhabited by the Mule Deer.

From observation, and all the information collected, we believe this species, in its geographical range, is confined to the Rocky Moun-

tains; they are most abundant on the eastern slope, and delight in rocky hills covered with cedar and pine trees. By the flattened and concave formation of their hoofs, they are enabled to climb the rocky steeps with much greater facility than other species of deer, and for the same reason we infer that they are more at ease in the snowy regions of the mountains.

FORE FOOT OF THE BLACK-TAILED DEER.

FORE FOOT OF THE MULE DEER.

GLIRES.

FIBER ZIBETHICUS.

Musquash. *Fiber zibethicus.* Cuv. Richardson, Fauna Boreali-Americana, vol. i. p. 115.

Muskrats, the name by which these animals are best known in the United States, were seen by the Expedition in Oregon. Along the Columbia River they are quite common, but it was remarked that all the specimens seen there, were smaller than those found on the Atlantic coast.

The only specimen preserved, was one obtained on the Willamette River, which having been destroyed by the exposure incident to a long journey on pack-horses, prevents our showing any specific difference, which the difference of size inclines us to suspect.

ARVICOLA MONTANA.

A. formâ rotundatâ: capite magno: auribus mediocribus et vellere pœnè vestitis: dentibus flavis: oculis parvis, nigris: pilis subtilibus sericisque, in dorso brunneis nigrisque intermixtis; infrà plumbeis: caudâ pedibusque brevi nitente pilo indutis: mystacibus albis nigrisque: mammis octo, quatuor in abdomine, in pectore totidem.

Form rounded; the head large, ears moderate, and nearly covered with fur; teeth yellow; eyes small, black; hair fine and silky; that of the back brown and black intermixed; beneath lead-coloured; tail and feet covered with short glossy hairs; whiskers white and black; teats eight in number, four pectoral, and four abdominal.

Total length, $6\frac{1}{8}$ inches, including the tail, which is $1\frac{1}{2}$ inches long.

Our specimen was obtained on the 4th of October, near to the head waters of the Sacramento River, in California.

ARVICOLA OCCIDENTALIS.

Plate XI. Fig. 1.

Collection Exp. Exp.

A. laniariis luteis: oculis parvis, nigris: auribus mediocribus, rotundatis, longo genarum vellere super eas obducto: caudâ brevibus nitidis pilis vestitâ et parumper compressâ sicut in Fibro Zibethico: pedibus etiam nitentibus pilis ornatis, ad latera longissimis, auxilium probabile dantibus natando: colore splendidè brunneo suprà, infrà plumbeaceo: subtilissimo et mollissimo vellere, ad basin saturatè plumbeo, in superficie brunneo.

Incisors pale-yellow; eyes small, black; ears of a moderate size, rounded, and covered by the long fur of the cheeks; tail covered with short glossy hairs, and somewhat compressed like that of the Muskrat (Fiber zibethicus); feet covered with glossy hair like the tail, longest on the sides: it probably assists them in swimming; colour, rich brown above, somewhat plumbeous beneath; fur very fine and soft, dark-plumbeous near the skin, and brown at the surface.

Length of the head and body, $4\frac{3}{10}$ inches; tail, $2\frac{1}{10}$ inches; hair beyond its end, $\frac{2}{10}$ inch; hind foot, $\frac{1}{2}$ inch; fore foot, from the wrist to the end of the toes, $\frac{1}{2}$ inch; head, $1\frac{2}{10}$ inch; ears, $\frac{9}{20}$ inch; in width, $\frac{8}{20}$ inch.

Obtained at Puget Sound, Oregon.

ARVICOLA CALIFORNICA.

PLATE XI. FIG. 2.

Collection Exp. Exp.

A. formâ robustiore præcedenti (A. occid.): caudâ rotundâ: pedibus anterioribus minoribus: vellere rudiori et dilutiùs colorato: auribus magnis rotundatisque, ferè pilis contextis: mystacibus plurimis, tenuibus, nigris albisque intermixtis.

Form more robust than the preceding species (A. occidentalis); tail round; fore feet smaller; fur coarser, and of a lighter colour; ears large and rounded, nearly covered with hair; whiskers numerous, slender, black and white intermingled.

Length of the head and body, $4\frac{4}{10}$ inches; tail, 2 inches; hair beyond the end of the tail; $\frac{2}{10}$ inch; hind foot, $\frac{9}{10}$ inch; fore foot, $\frac{9}{20}$ inch; head, $1\frac{4}{10}$ inch; ear, $\frac{6}{10}$ inch; ear in width, $\frac{1}{2}$ inch.

It is not uncommon at the Bay of San Francisco, in California, in all moist and grassy situations; but from the form of the tail, we infer that they are not aquatic in habits, like the Arvicola occidentalis, to which it is nearly allied.

HYSTRIX PILOSUS.

Hystrix pilosus, Catesby. Canada Porcupine. Richardson, Fauna Boreali-Americana, vol. i. p. 214.
Hystrix Dorsata. L. Gmel.
Hystrix Hudsonicus. Briss.

The "quills" of this species of Porcupine were obtained from some Indians whom we met while crossing the Shasty Mountains, lying between Oregon and California. There can be little doubt of the animal's inhabiting that part of the continent near the Pacific Ocean, about the forty-second degree of latitude, although unknown to be

there by the traders and trappers of fur-bearing animals, who occasionally cross that tract of country in search of beavers in Upper California. The Indians from whom we obtained the quills, are generally hostile to white people, and all the surrounding tribes of their own colour; and we believe could not have obtained the Porcupine quills in trade, because they are not used by the Indians in the south of Oregon for embroidery, as they are to the north.

MUS DECUMANUS.—(Linn.)

The common Brown or Norway Rat, was observed at the Hawaiian, and some other islands in the Pacific Ocean, where it has been introduced by commercial intercourse with Europe and America. It was observed to retain its partiality for the habitations of mankind, with all its burrowing and destructive habits, but does not seem to multiply so rapidly as it does in those countries where the cereal grains are grown, or dealt with as a matter of commerce. We did not find it on islands uninhabited by mankind.

MUS EXULANS.

PLATE XII. FIG. 1.

Collection Exp. Exp.

Nearly all the coral islands visited by the Expedition, were found to be inhabited by rats, so like the common Brown or Norway Rat, *M. decumanus* of naturalists, that they might be pronounced a diminutive variety, had we not found them inhabiting islands many thousand miles apart, but still retaining their somewhat peculiar habits, with but little variation in size. The females have two pectoral and four abdominal teats. In the arrangement and colour of the teeth, the texture and colour of the hair, the scutæ of the tail, general form, and in most specific characters, excepting size, the animal resembles the Brown or Norway Rat.

This species was seen on but one "high" island, the island of Ta-

hiti; it seems to prefer the low coral islets. It constructs a nest in the "tussucks" of grass, and makes shallow burrows, like the Arvicola. Its food consists principally of the fruit of the Pandanus; it evinces but little carnivorous appetite, as various species of land-crabs abound near their haunts without being much disturbed, and the neighbouring shores afford abundant mollusca, the empty shells of which would betray the fact, if such was the food of this rat. The animal before us has the decided habits of a meadow-mouse (Arvicola); it is generally found in pairs, and when pursued is soon tired, and easily captured; but unlike the Norway Rat, it utters no cry, although they resist pertinaciously, and bite severely; when pursued, they sometimes endeavour to escape by ascending trees, should any be near.

Specimens from different islands in the Pacific Ocean:

	Dog Island.	Disappointment Isl.	Tahiti.	Wake's Island.	Hull's Island.
	Male.	Female.	Female.	Female.	Female.
	In. 10ths.	In. 10ths.	In. 10ths.	In. 10ths.	In. 10ths.
Length of head and body, . .	5 3	6 5	5 4	5	5 2
" tail, ...	5 3	5	4 8	5 3	5 3
" hair beyond the tail,	$\frac{1}{20}$			$\frac{1}{20}$	
" head, ...	1 5	1 4	1 9	1 4	1 6
" ears, ...	6		6	6	6
" fore arm, ...	8	1	9	9	9
" fore paw, ...	5		5	5	5
" tibia, ...	1 2		1 2	1 4	1 3
" hind foot, ...	1 1		1 1	1 $\frac{3}{20}$	1 1

MUS VITIENSIS.—(Nob.)

PLATE XII. FIG. 2.

Collection Exp. Exp.

M. caudâ caput corpusque longitudine superante: formâ tenui et gratiosâ: pilis subtilibus, longis, speciem sericam gerentibus: colore suprà sepiæ brunneo, infrà propè albo: pedibus magnis, albis: pollice brevi, ungue complanato: caudâ pallidè gilvâ, cum squamis brunneis exiguis quæ pilis subtilibus sericis vestiuntur: oculis mediocribus, nigris: auribus magnis, rotundatis et molliter serico-pilosis: laniariis parvis et flavido-albis. Femina.

Tail longer than the head and body; form light and graceful; hair fine, long, and silky in texture; colour sepia-brown above, nearly white beneath; feet large, white; thumb short, with a flattened nail; tail pale flesh-colour, with very small brown scales, covered slightly by fine silky hairs; eyes of a moderate size, black; ears large, rounded, and covered with silky hairs; incisor teeth small, and of a yellowish-white colour.

Length of the head and body, $3\frac{1}{10}$ inches; tail, $3\frac{4}{10}$ inches; hair at the extremity of the tail, $\frac{1}{20}$ inch; head, $1\frac{1}{10}$ inch; ears, $\frac{4}{10}$ inch; fore arm, $\frac{1}{2}$ inch; paw, $\frac{4}{10}$ inch; tibia, $\frac{9}{10}$ inch; hind foot, $\frac{9}{10}$ inch. Female.

Male: length of the head and body, 4 inches; tail, $4\frac{1}{2}$ inches.

This animal is a great pest in most of the houses on the Feejee Islands; they make their nests in the thatched roof, being excellent climbers, and sally forth at night in such numbers as to be exceedingly troublesome. To us strangers, their gambols overhead in the thatch, were so noisy as to banish sleep, and their attacks on our pockets and packs, containing edibles provided for our excursions, were so vigorous, that cloth and buttons, or willow baskets, afforded no protection from them.

The natives have a very simple and ingenious contrivance to save provisions from their attacks; it is an implement suspended from the

roof, as represented below; which being sometimes fancifully carved, led some of our officers, not acquainted with the contrivance, to suppose they were household gods.

PROVISION SAFE.

MUS MUSCULUS.—(Linn.)

Collection Exp. Exp.

The common Mouse seems to keep pace with the progress of civilization, and may be considered a parasite of our race. We saw specimens in Chili, in Peru, at the Sandwich Islands, New Zealand, and on the Columbia River, in Oregon. In all these places, as with us in the United States, they frequent the habitations of mankind only, and that always to the exclusion of any small native species of mice, which may have previously partaken of the same abode.

MUS PERUVIANUS.—(Nob.)

PLATE XIII. FIG. 1.

Collection Exp. Exp.

M. suprà flavescenti-brunneus, lateribus in fulvum vergentibus: pedibus, gutture et corpore inferno, albis: caudâ longâ, gracili, pallidè gilvâ, lineâ brunneâ supernè notatâ: oculis parvis, nigris: auribus magnis, rotundis, nudisque: parvo flocco albi velleris ponè aures, quæ non cernuntur dum retro recumbunt: posterioribus corporis extremitatibus notatu dignis propter parvitatem dimensionum: caudâ longâ et tenui, aspectum peculiarem toti corpori præbente.

Upper parts yellowish-brown, inclining to tawny on the sides; feet, throat, and under parts of the body white; tail long, slender, pale flesh-colour, with a brown line on the upper surface; eyes small, black; ears large, round, and naked; a small tuft of white fur behind the ears, which is invisible when they are thrown back. The posterior extremity of the body small, the tail long and slender, presenting, as a whole, a peculiar contour.

Length of the head and body, $2\frac{3}{10}$ inches; tail, $3\frac{1}{10}$ inches; head, $\frac{9}{10}$ inch; ear, $\frac{1}{2}$ inch; fore arm, $\frac{1}{2}$ inch; foot, $\frac{3}{10}$ inch; tibia, $\frac{8}{10}$ inch; hind foot, $\frac{7}{10}$ inch.

The specimens were obtained near Callao, in Peru; their nests were found in the fences built of *adobes*, or sun-dried bricks, and consisted of fine grass, feathers, &c.

MUS LEUCOPUS.

American Field-mouse. *Mus leucopus.* Rafinesque. Richardson, Fauna Boreali-Americana, vol. i. p. 142.

Collection Exp. Exp.

This species of Mouse was met with in considerable numbers on the west coast of America, from Puget's Sound, in the north, to the Bay of San Francisco, in California, south; and probably inhabits the country much further in each direction.

Genus CRICETODIPUS.—(Nob.)

Caput corpusque ejusdem fermè magnitudinis: ampli genarum ventriculi extrinsecè ori disrupti: laniarii superiores parvi, angusti, incurvi, et exteriùs longitudinaliter canaliculati: inferiores similiter angusti, rotundati, ad apices appropinquantes: singuli molares tuberculis senis rotundatis instructi: aures parvæ, rotundatæ: oculi mediocres: crura anteriora parva: pedibus cum quatuor digitis et pollice; hujus ungue complanato: crura postica magna, valida: pedibus cum quinque digitis, cuique suo distincto metatarso: cauda longior capite corporeque simul.

Head and body nearly equal in size; spacious cheek-pouches outside of the mouth; upper cutting teeth small, narrow, incurved, and channelled longitudinally on the exterior; lower cutting teeth narrow, rounded, and approximating at the points; molars with six rounded tubercles on each; ears small, rounded; eyes medium-sized; fore legs small; feet with four toes and a thumb, the latter having a flattened nail; hind legs large, strong; the feet having

five long toes, each with a distinct metatarsus; tail longer than the head and body.

Dental formula: incisors, $\frac{2}{2}$; canine, $\frac{0\,0}{0\,0}$; molars, $\frac{3\,3}{3\,3} = 16$.

CRICETODIPUS PARVUS.—(Nob.)

Plate XIII. Fig. 2.

Collection Exp. Exp.

C. capite ovato: rostro elongato, acuminato, piloso, exceptis naribus parvis convolutisque: labiis magnis, tumidis, et pilis brevibus consitis: mystacibus plurimis, albis: flocco alborum pilorum seu setarum in mento: genarum ventriculis amplis, disruptis extrinsecè ori, ex supremo labio ad guttur usque protentis; cavitate retrorsum ad aures pertingente, pilosâ: oculis mediocribus: auribus parvis, rotundis, pilosè fimbriatis: anterioribus cruribus parvis: pede mediocri, setosis marginato pilis: unguibus brevibus, uncinis, excepto polliculari in orbem figurato vel ad instar humani: posticis cruribus longis: pedibus magnis validisque, digitis quinque instructis, medio cæteris aliquantulò longiore: intimo digito brevissimo, attingente tantùm metatarsa cæterorum ossa: unguibus omnibus brevibus, acuminatis, modicè incurvis: caudâ longâ, attenuatâ, pilis brevibus sericis coopertâ: colore suprà sepiaco-brunneo, infrà albo: obscurâ lineâ transcurrente genas sub oculis.

Head ovate; the snout elongate, pointed, and covered with hair, excepting the nostrils, which are small and convolute; lips large, tumid, and covered with short hairs; whiskers numerous, white; a tuft of white hairs or bristles on the chin; cheek-pouches spacious, opening outside of the mouth, and reaching from the upper lip to the throat; the cavity extending backwards to the ears, and lined with hair; eyes medium size; ears small, round, and fringed with hairs; fore legs small, the feet moderate, margined with bristly

hairs; the nails short, curved, excepting that of the thumb, which is orbicular, or resembling the human thumb nail; hind legs long; the feet large and strong, five-toed; the middle one slightly longer than the rest; inner toe shortest, reaching only to the end of the metatarsal bones of the others; all the nails short, pointed, and slightly curved; tail long, tapering, and clothed with short silky hairs. Colour above sepia-brown; beneath white; a dark line crosses the cheeks beneath the eyes.

Length of the head and body, $1\frac{9}{10}$ inch; head, from the nose to the occiput, $\frac{9}{10}$ inch; ears, $\frac{3}{20}$ inch; tail, $2\frac{3}{10}$ inches; fore leg, from the elbow, $\frac{9}{20}$ inch; fore foot, $\frac{3}{10}$ inch; tibia, $\frac{7}{10}$ inch; hind foot, $\frac{8}{10}$ inch; metatarsus, $\frac{5}{10}$ inch.

A single specimen of this singular animal was obtained in Oregon, but no notes were furnished by the person who obtained it. The formation of its hind legs leaves but little room to doubt that its habits are similar to the jumping mice, *Meriones Labradorius* (Richardson), which are inhabitants of the same region. Its singularly large head, which equals its body in bulk, its ample cheek-pouches, long hind legs, and long tail, present a general form which is peculiar and altogether very remarkable. On dissection, the stomach was found to contain a pulpy matter, which appeared to be the remains of a bulbous root; the liver is very large, and consists of five foliaceous lobes; we were not able to detect any gall-bladder. The specimen is a female, and presents the rudiments of a fourth molar tooth in each side of the lower jaw, which would eventually have replaced the front ones, already much worn.

LEPUS LONGICAUDATUS.

Long-tailed Hare. *Lepus longicaudatus.* Gray. Bachman, Journal of the Academy of Natural Sciences, Philadelphia, vol. viii. p. 83.
Lepus longicaudatus. J. E. Gray, Loudon's Mag. of Nat. History, vol. i. (new series) p. 586.*

* Is there not a mistake in the locality? "Magellan Land. Capt. P. P. King."

In the southern parts of Oregon, and northern parts of California, this species of hare was met with in considerable numbers, particularly in some spots on the Sacramento River. They frequent the prairies, and grounds covered with low bushes, being most common in the latter; do not burrow, and when running, carry their ears erect, make three short and one long leap. The iris light-brown, with dark radiations. A female killed on the 24th of September, was still suckling her young.

The Indians construct long hedges of thorny brush, leaving openings at intervals, in which they set snares, so constructed as to catch the hares when passing, without the use of springs; the noose is made of a substance like hemp, very strong, and neatly twisted into cords.

SCIURUS FOSSOR.—(Nob.)

Plate XIV.

S. molari anteriori in maxillâ supremâ rudimentali: caudâ luxuriante vellere vestitâ, corporis capitisque simul æquante longitudinem: colore suprà griseo, albo infrà: pedibus supernè griseis: laniariis anticè obscuro-aurantiis: pilis dorsalibus ad radices saturatè plumbeis, exindè nigris, ad summitatem albâ fasciâ notatis: caudâ griseâ cum nigrâ fasciâ et albo apice.

The front molar in the upper jaw, rudimentary; tail bushy, and equalling the head and body in length; colour above gray, beneath white; upper parts of the feet gray; fronts of the incisor teeth dark orange; hair on the back dark lead-colour at the roots, then black, with a white band near the extremity; hair of the tail gray, with a black band and white tip.

Dental formula: incisors, $\frac{2}{2}$; canine, $\frac{0\,0}{0\,0}$; molars, $\frac{5\,5}{4\,4} = 22$.

Length of the head and body, about 14 inches; head, $3\frac{3}{10}$ inches; tail, including the hair, $16\frac{2}{10}$ inches; hair at the end of the tail, $2\frac{8}{10}$ inches; hind foot, $2\frac{9}{10}$ inches; ear, $1\frac{2}{10}$ inch.

In the southern parts of Oregon there is a species of pine (*Pinus Lambertii*, Douglass,) which produces a cone about fifteen inches long, and eighteen in circumference: the gum or resin which exudes where the tree has been wounded, is sweet, tasting like manna, which it also resembles in appearance and in its gentle purgative qualities. The fruit of this pine furnishes food to the natives, as well as to the subject of this description, which is one of the largest of the American squirrels; it was found by our party wherever we saw the above-mentioned pines. It digs holes in the ground, to which it retreats when pursued, or shot at, although it is able to climb with great facility. In this respect it greatly resembles our common ground-squirrel, (*Tamias Lysteri*, Ray,) but is not habitually found on the ground, being most frequently seen on the pine trees.

APLODONTIA LEPORINA.

Plate XV.

Aplodontia leporina. The Sewellel. Richardson, Fauna Boreali-Americana, vol. i. p. 211.

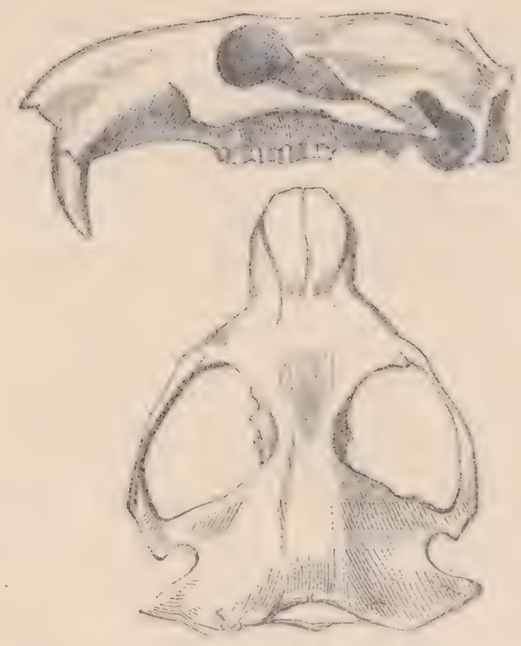
Collection Exp. Exp.

General form rounded, thick, and short, with a flat and broad head, the whole covered with fur and hair intermixed, the former fine, half an inch long, dark-plumbeous tipped with umber-brown; the hair from eight-tenths to an inch in length, very thin, and of a brown colour at the roots and tips, but much inflated and black in the middle, very glossy, and at certain angles reflecting light of a cobalt-blue colour; whiskers, tufts of bristles on the ulna and cheeks, white; ears very small, rounded, and nearly covered with fur; eyes small; nose large, tumid; tail scarcely perceptible; fore feet larger and stronger than the hind; the claws strong, curved, compressed; the thumb with a flattened, blunt nail; hind feet with the three middle toes nearly equal, the outer and inner toes almost equal, the inner one being shortest; the nails less curved, and less compressed than those of the

fore feet. Incisor teeth powerfully strong, and of a clear yellow colour.

Length of the head and body, $14\frac{2}{10}$ inches; tail, including the hair, $1\frac{4}{10}$ inch; hair at the end of the tail, 1 inch; head, from the nose to the ear, $2\frac{3}{10}$ inches; to the eye, $1\frac{4}{10}$ inch; whiskers, $3\frac{1}{2}$ inches; longest claw (fore foot), $\frac{6}{10}$ inch; thumb, including the nail, $\frac{3}{10}$ inch; nail, $\frac{2}{10}$ inch; hind foot (almost plantigrade), $2\frac{2}{10}$ inches; middle toes, $\frac{9}{10}$ inch. Male.

The specimens were obtained at Nisqually, Puget Sound, Oregon, where it is quite a common animal, and their skins are much prized by the Indians for making robes, used in the place of blankets. The occipital portion of the skull is remarkable in form, from its great breadth and flatness.



APLODONTIA LEPORINA—SKULL.

RAPTORES.

VULTURIDÆ.

CATHARTES CALIFORNIANUS.

Vultur Californianus. Latham, Gen. Hist. of Birds, vol. i. p. 7.
Audubon, Birds of America, vol. i. p. 12.

This cannot be considered a common bird in Oregon; we first saw them on the plains of the Willamette River, but subsequently observed that they were much more numerous in California, from the fact that the carcasses of large animals are more abundant, which they certainly prefer to the dead fish on which they are obliged to feed in Oregon, and all the countries north of the Spanish settlements in California. Precisely the same change takes place from youth to maturity in this species, which is known to take place with the Turkey-Buzzard (*Cathartes aura*): the young having black or brownish heads, which become red as they become older.

CATHARTES AURA.—(Ill.)

Turkey-Buzzard. *Vultur aura.* Wilson's Am. Orn., vol. ix. p. 96.
Cathartes aura. Richardson, Fauna Bor. Am., vol. ii. p. 4.
Cathartes aura. Audubon, Birds of America, vol. i. p. 15.

Collection Exp. Exp.

Observed at every place visited by the Expedition on the coasts of North and South America, from Nassau Bay, Cape Horn, to Puget's Sound, on the Northwest Coast; quite common in Oregon and California.

CATHARTES ATRATUS.

Vultur atratus. Bartram, tr. p. 287.
Vultur atratus. Wilson's Am. Orn., vol. ix. p. 104.
Cathartes atratus. Wilson. Audubon, Birds of Am., vol. i. p. 17.

We did not observe this bird to be common in Oregon, but saw it more frequently in California. It seems generally to accompany the preceding species, but is more familiar in its habits; is the most plentiful of the two species in the warmer parts of both North and South America, and decreases in numbers as we approach the colder latitudes, where the *aura* is most abundant.

FALCONIDÆ.

POLYBORUS BRAZILIENSIS.—(Sw.)

Polyborus Braziliensis. Swainson. Voyage of the Beagle and Adventure, part iii. p. 9.

Collection Exp. Exp.

Observed to be common in all parts of South America visited by the Expedition, including Cape Horn; we did not see it in California. Their habits are so well described by Mr. Darwin, in his Zoology of the voyage of H. M. S. Beagle, that any remarks of ours are rendered quite unnecessary.

Mr. Audubon obtained specimens from Florida, and we have seen one from Texas, which differs from our specimens obtained in Patagonia, Cape Horn, and Chili, by having the bars across the feathers of the breast wider and not so numerous, which, with some other characters it possesses, lead us to suspect that a comparison of numerous specimens, will prove the North American to be specifically distinct from the South American "Cara-cara."

MILVAGO LEUCURUS.—(Darwin.)

Falco Novæ Zealandiæ. Lath. Gen. Hist. of Birds, vol. i. p. 160.
Milvago leucurus. Zool. of the Beagle, part iii. p. 15.
Caracara funèbre. Falco Novæ Zealandiæ. Temm., pl. col. 192.

Collection Exp. Exp.

Not uncommon at Orange Harbour, Tierra del Fuego, where we saw and obtained a number of them, but we *did not see it* in New Zealand, where we doubt its having been found.

MILVAGO OCHROCEPHALUS.—(Spix.)

Collection Exp. Exp.

A pair of these birds were found on an island opposite the harbour of Rio Janeiro, on the 7th of January, where we had every reason to believe they were breeding; we were not, however, successful in finding their nest.

MILVAGO CHIMANGO.—(Darwin.)

Milvago chimango. Darwin, Zool. H. M. S. Beagle, part iii. p. 14.

Collection Exp. Exp.

We obtained them on the Rio Negro, Patagonia, and in Chili. They are subject to great changes of plumage from age, and before moulting, the old feathers fade and become very light-coloured. In Chili they are very tame, and are seen in considerable numbers along the public roads, feeding on the carcasses of horses and cattle left dead by travellers. *Family* parties of six or seven are frequently seen together, from which we suppose they lay four eggs; but we were not so fortunate as to find their nests. Their voices are plaintive, and they are inclined to be noisy.

BUTEO VARIUS.

Buteo varius. Gould, Proceedings Zool. Soc., pt. v. p. 10.
Buteo varius. Darwin, Zool. of the Voy. of the Beagle, pt. iii. p. 26.

Collection Exp. Exp.

On the Rio Negro, Patagonia, this species is common; we saw them near the mouth of the river, sitting on the pinnacles of bare sand-hills, or on low bushes, (that part of Patagonia being destitute of trees,)

watching for small birds and lizards, on which they feed. We saw them again at Orange Bay, Tierra del Fuego, and near Valparaiso, in Chili. The specimen which we obtained at Orange Bay, is considerably larger than any of the others, but offers no other distinctive character.

BUTEO BOREALIS.

Falco borealis. Lath. Gen. Hist. of Birds, vol. i. p. 265.
Falco borealis and *Leverianus.* Wilson, Am. Orn.
Buteo borealis. Richardson, Fauna Bor. Am., vol. ii. p. 50.
Common Buzzard. *Buteo vulgaris.* Audubon, Birds of America, vol. i. p. 30, pl. 6.

Rather common along the Columbia River, and in other parts of Oregon, throughout the year; they are darker-coloured in summer than in the winter season.

BUTEO SOLITARIUS.—(Nob.)

Plate XVI.

B. formâ generali robustâ: capite, pectore, ani plumis, crisso femoribusque flavescenti-albis; plumarum basi albâ, apice lutescente: collo supernè maculis umbrinis notato; auricularibus summo margine exteriori delicatè umbrino depictis: dorso umbrino, plumarum basi albâ: caudâ duodecim constitutâ plumis, suprà pallidè umbrinis, subtùs pallidioribus, scapis albis: caudæ tectricibus superioribus flavescenti-albis, irregulariter pallido-umbrino marginatis; crisso pallidè flavescenti-albo: alis rotundatis; è primariis tertiâ, quartâ quintâque ferè æqualibus, supernè fusco-umbrinis, subtùs pallidioribus, basi albis; scapis desuper diluto-umbrinis, infrà albis: secundariis verò hisce pallidioribus, margine albidescente; tectricibus minoribus lutescentibus, umbrino-fasciatis: scapularibus umbrinis: rostro cœrulescenti-nigro: cerâ pedibusque pallidè cœruleis: unguibus nigris.

General form robust; head, breast, vent, under tail coverts, and thighs, yellowish-white; the feathers being white at base, and tipped with buff-yellow; neck above spotted with umber; the auriculars finely tipped with umber on the outer margin; back, umber, the feathers white at base; tail consisting of twelve feathers, which are pale umber-colour above, lighter beneath; shafts white; upper tail coverts yellowish-white, with a pale irregular margin of umber; under coverts pale yellowish-white; wings rounded; third, fourth, and fifth primaries, nearly equal; dark umber-colour above, lighter beneath, and white at the base; shafts light umber above, and white beneath; secondaries paler than the primaries, and having a light margin; lesser coverts pale buff, barred with umber; scapulars umber; bill bluish-black; cere and feet pale blue; claws black.

Total length, 19 inches; bill, $1\frac{5}{10}$ inches; hind claw, $1\frac{3}{5}$ inches.

This Buzzard was seen at the island of Hawaii, and from what we could learn from the natives, does not inhabit any other island of the group. It appears to have all the characteristic habits of the genus; sits solitary on dead trees, patiently watching small birds, which constitute its principal food. We did not hear it utter any cry.

The specimen from which the drawing was made, was obtained near Karakakoa Bay, by the Rev. Mr. Forbes, Presbyterian missionary on that station; he transmitted it to Mr. J. K. Townsend, who kindly loaned it to be drawn,—most of our own specimens of birds collected on the island of Hawaii, having been lost at the mouth of the Columbia River, by the wreck of the U. S. Ship Peacock.

CIRCUS CYANEUS.—(L.)

Falco cyaneus et uliginosus. Lath. Gen. Hist. of Birds, vol. i. pp. 94—270.
Falco uliginosus. Wilson, Am. Orn., vol. vi. p. 67.
Falco cyaneus. Bon., Am. Orn., vol. ii. p. 30.
Buteo (Circus) cyaneus? Richardson, Fauna Bor. Am., vol. ii. p. 55.
Common Harrier. *Circus cyaneus.* Audubon, Birds of Am., vol. i. p. 105.

We occasionally saw these hawks on open prairie lands throughout the whole route, from the Columbia River to San Francisco, in California, so that it may, with tolerable certainty, be asserted, to inhabit every part of the continent of North America, where there is open land, prairie, or marsh.

CIRCUS APPROXIMANS.—(Nob.)

Plate XVIII.

Collection Exp. Exp.

C. formâ generali similis C. cyaneo, sed grandior: capite colloque fuliginoso-striatis, sepiaco-brunneis albisque: dorso cum alis sepiaco-brunneo: caudam duodenis plumis constituentibus, fasciis quinque brunneis singulas notantibus, binis intermediis cinereis, reliquis plus minùsve quoad pogonia interna ferruginosis: radiis externis trium exteriorum prope basin albis: caudâ subtùs ferè albâ, fusco-fasciatâ, fasciis plumarum binarum exteriorum obscurioribus: gutture, pectore anoque fulvis, quâvis plumâ per medium brunneo strigatâ: verticis nuchæque plumis ad basin albis; capitis in medio brunneis, ferruginoso-marginatis: plumarum colli marginibus albis maculam nuchalem afformantibus: scapularibus saturatè sepiaco-brunneis, apicibus angustè ferrugineo tinctis: primariis fusco-brunneis, pogonio exteriori griseo: alulâ griseâ, fasciis tribus brunneis ornatâ, rhachibus suprà castaneis, infrà fuscescentibus: tertiâ remigum longissimâ; primâ sextâque ferè æqualibus; quatuor primarum radiis internis profundè indentatis et subtùs fulvo pallidè fasciatis.

The general form like C. cyaneus, but larger; head and neck striped with ferruginous sepia-brown and white; back and wings sepia-brown; tail consisting of twelve feathers, each having five brown bars; the two middle feathers cinereous, the others more or less ferruginous on their inner webs; the three outer feathers white on their outer webs near the base; tail, beneath nearly white, with dusky bars, which are obscure on the two outer feathers; throat, breast, and vent, tawny; each feather having a brown stripe along its centre; feathers of the crown and nape white at their bases;

those of the head brown in the centre, with ferruginous margins; those of the neck with white margins, which form a nuchal spot; scapulars dark sepia-brown, slightly tipped with ferruginous; primaries dark brown, gray on the outer web; spurious wings gray, with three brown bars; shafts chestnut-brown above, dusky beneath; third quill longest; first and sixth nearly equal; four first with deeply indented inner webs, and slightly barred on the under side with tawny.

Total length, 19½ inches; wing, from the flexure, 15¾ inches; tail, 8½ inches; tarsi, 3½ inches; middle toe, including the nail, 1¾ inches; nail, $\frac{7}{10}$ inch; bill, $1\frac{3}{10}$ inches. Male.

It inhabits the Feejee Islands, where there are large tracts of country having but a few scattered trees, but abounding in rank herbs and grass; over these spots the traveller will frequently see a hawk coursing with untiring industry, now and then poising itself and remaining as it were suspended in the air over some unfortunate little bird, which is unavailingly trying to hide from its now plunging enemy. The game is generally devoured on the spot where it is captured, and not borne off to some old tree, as is customary with many of this family.

This hawk's manners, its long wings and tail, its white rump, and unceasing industry in coursing, will at once remind the American of our own Marsh Hawk, and the Englishman of his Harrier. From the gray colour on the outer edges of the wings, we have no doubt but that in mature plumage, or at some particular season of the year, this species is of a blue-gray colour, like the preceding species. Lizards form no inconsiderable portion of their food.

Our specimen is a male, and was shot at Mathuata, island of Venua Levu, on the 21st of June.

FALCO PEREGRINUS.—(L.)

Falco peregrinus. Lath. Gen. Hist of Birds, vol. i. p. 81.
Falco peregrinus. Wilson, Am. Orn., vol. ix. p. 120, pl. 76.
Falco peregrinus. Richardson, Fauna Bor. Am., vol. ii. p. 23.
Falco peregrinus. Audubon, Birds of America, vol. i. p. 84.

Collection Exp. Exp.

Our specimen of this bird, which was obtained at Puget Sound, on the Northwest Coast of America, is larger and darker-coloured than any we have seen east of the Rocky Mountains; but having seen them breeding in the precipices of the Rocky Mountains, and observed well-characterized specimens on the Columbia River, and in several parts of Oregon and California, we cannot but conclude it to be a very old female.

Total length, $22\frac{1}{2}$ inches; wing, from the flexure, 16 inches; tarsi, $2\frac{1}{20}$ inches; middle toe, including the nail, 3 inches; nail, $\frac{8}{10}$ inch; hind toe, including the nail, $1\frac{9}{10}$ inches; nail, $\frac{19}{20}$ inch; tail, $8\frac{1}{2}$ inches.

All the upper parts sepia-brown, the edges of the feathers somewhat lighter; tail dark gray, without bars; breast, belly, and vent, sepia-brown, the feathers slightly margined with yellowish-white; under tail coverts and flank feathers barred with yellowish-white; bill very stout and broad.

FALCO PEREGRINOIDES?

Falco peregrinoides. Temminck, pl. col. 479?

Collection Exp. Exp.

A beautiful little hawk, the counterpart of the Peregrine Falcon, except in size, was obtained in the district of Argyle, New South Wales; its motions were full of vigour, and its flight very rapid.

Not having access to a copy of Temminck's coloured plates, we

have adopted his name from the analogy, without even knowing that his bird was from Australia.

Total length, $12\frac{3}{4}$ inches; wing, from the flexure, $11\frac{2}{10}$ inches; tips even with the end of the tail; tail, 5 inches; tarsi, $1\frac{4}{10}$ inches.

FALCO SPARVERIUS.—(L.)

Sparrow Hawk. *Falco sparverius.* Wilson, Am. Orn., vol. ii. p. 117.
Sparrow Hawk. *Falco sparverius.* Audubon, Birds of America, vol. i. p. 90.

Quite common in Oregon and California, and we also saw them in Brazil, and other parts of South America.

FALCO FEROX.—(Nob.)

PLATE XVIII.

Collection Exp. Exp.

F. capite dorsoque penitùs fusco-sepiaco-brunneis: caudâ concolore, fasciis sex angustissimis pallidè fulvis notatâ: verticis nuchæque plumis ad basin colore pallidè cineraceo, in sepiaco-atrum, qui exteriùs apparet, transeunte: superciliis ferrugineis: auricularibus brunneis, plumulis inferioribus ferrugineo marginatis: gutture pallidè lutescenti, ferè albo: pectore abdomineque rubido-lutescentibus, brunneo strigatis punctulatisque: ano lutescenti, brunneo striato: femoribus crissoque ferrugineis, singulis plumis lineâ fusco-sepiacâ, per scapum descendente, notatis: primariis caudâque subtùs plumbeis, albo fasciatis; scapis subtùs albis, desuper nigris: remigum tertiâ longissimâ; primâ quintâque æqualibus: tectricibus subjacentibus minoribus lutеolis, medio brunneis: caudâ rotundatâ, duodecim constante plumis, quarum scapi supernè fusco-brunnei, subtùs fuscescenti-albi: fasciis pallidis juxta corpus latissimis atque maximè conspicuis, gradatim versus caudæ extremitatem minùs insignibus: cerâ pedibusque pallidè cæruleis: iride brunneâ.

Head and back of a uniform dark sepia-brown; tail of the same colour, having six very narrow, pale tawny bars; feathers of the crown and nape, light cinereous at the base, which gradually runs into the dark sepia of the surface; brow ferruginous; auriculars brown, the lower feathers edged with ferruginous; throat pale buff, nearly white; breast and belly striped, and spotted with brown on a reddish-buff ground; vent buff, striped with brown; thighs and under tail coverts ferruginous; the centre of each feather shaded with a dark sepia line along the shaft; primaries and tail beneath plumbeous, barred with white, and having the shafts white beneath, and black on the upper surface; third quill longest; first and fifth equal; small under coverts buff-colour, with brown centres; tail rounded, composed of twelve feathers, the shafts of which are dark-brown above, dusky-white beneath; the light bars broadest and most conspicuous near the body, and becoming less conspicuous towards the extremity of the tail; cere and feet pale-blue; irides brown.

Total length, $14\frac{1}{2}$ inches; wing, from the flexure or carpal joint, 9 inches; tail, 6 inches; bill, $\frac{8}{10}$ inch; tarsi, $2\frac{1}{10}$ inches.

At the Bay of Islands, New Zealand, we found several interesting birds, amongst them this graceful falcon, which we believe to be an adult male. It flew with great vigour, and appeared to create great terror in all the little birds of the neighbourhood. When alighting on the branch of a tree, it had the habit of jutting its tail like the Sparrow Hawk of North America, (*F. sparverius.*)

ASTER RUFITORQUES.—(Nob.)

Plate XIX.

Collection Exp. Exp.

A. capite, dorso, alis caudâque cærulescenti-cinereis: gutture cum crisso, albo: torque cervicis, pectore, ventre, femoribusque pallidè rufescentibus: alis subtùs atque plumarum omnium basi, albis: alis rotundatis: remige quartâ longissimâ, primam longitudine duplo superante; rhachibus nigris: caudâ modicè rotundatâ, quam duodecim constituunt

plumæ, subtùs pallidiores; scapis superne nigris, subtùs albis: rostro unguibusque cœrulescenti-nigris: cerâ, palpebris, tibiis cambogiaco-nitidis: iride aurantiâ. Mas adultus.

A. juvenis: capite dorsoque umbrinis, plumis ferruginoso marginatis, albo fasciatis, fasciis vix discernendis nisi plumæ erigantur: gutture albo: pectore albidescenti-fulvo, singulas plumas lineâ medianâ maculâque apicali umbrinâ notantibus: lateribus umbrino fasciatis; femoribus fulvis, pallido ferrugineo irregulariter fasciatis: alis umbrinis, fasciis saturatioribus; subtùs fulvis, umbrino vittatis; scapis subtùs furvis, supernè brunneis: caudâ suprà umbrinâ, subtùs albicante, ferruginoso marginatâ tinctâque, fasciis nigricantibus duodenis rectrices omnes transversim notantibus, binas autem intimas extimasque minùs conspicuè; rhachibus desuper brunneis, subtùs albis: rostro cum unguibus nigro: cerâ, palpebris tibiisque olivascentibus: iride brunneâ.

Head, back, wings, and tail, light blue ash-colour; throat and under tail coverts white; cervical collar, breast, belly, and thighs, pale rufous; under parts of the wings, and the base of all the plumage, white. Wings rounded; the fourth quill longest; the first, half the length of the fourth; shafts black; tail slightly rounded, consisting of twelve feathers, the colour lightest beneath; shafts black above, white beneath; bill and claws blue-black; cere, eyelids, and legs, rich gamboge-yellow; irides orange.

The female does not differ from the male except in size, being much larger, and in having the under tail coverts pale rufous instead of white.

Young. Head and back umber, the feathers edged with ferruginous, and barred with white, the latter scarcely visible without raising the feathers; throat white; breast tawny-white, each of the feathers having a central line, and terminal spot of umber; flanks barred with umber; thighs tawny, with irregular bars of pale ferruginous; wings umber, with darker bars; beneath tawny, barred with umber; shafts dusky beneath, brown above; tail umber on the upper surface, whitish beneath, edged and tinged with ferruginous; twelve dark bars cross the whole, but are palest on the two inner and two outer feathers; shafts brown above, white beneath; bill and claws black; cere, eyelids, and legs, pale olive green; irides brown. Young females agree with the above description of the male.

This beautiful Hawk was found on all the Feejee Islands, where it is known to the natives as the "*Manu levu*," great bird. The first which we saw was the adult male, from which our description is taken; it was dashing through the valleys of the island of Ovolau, near the town of Levuka, inspiring great terror into all the feathered race, not excepting pigeons of a size equal to its own; it had captured a small bird, on which it was feeding when killed.

Total length of an adult male, 13 inches; extent of wings, $25\frac{3}{4}$ inches; wing, from the carpal joint, $8\frac{9}{10}$ inches; tail, 6 inches; bill, $\frac{9}{10}$ inch; to the angle of the mouth, $\frac{19}{20}$ inch; tarsi, $2\frac{1}{10}$ inches; middle toe, including the nail, $1\frac{4}{10}$ inches; nail, $\frac{1}{2}$ inch; hind toe, including the nail, $1\frac{1}{10}$ inches; nail, $\frac{6}{10}$ inch.

A second adult male measured $12\frac{2}{10}$ inches in total length; wing, from the carpal joint, $8\frac{2}{10}$ inches; tail, $5\frac{4}{10}$ inches; bill, $\frac{9}{10}$ inch; to the angle of the mouth, $\frac{9}{10}$ inch; tarsi, $2\frac{1}{10}$ inches.

Adult female: total length, $15\frac{7}{10}$ inches; wings, from the carpal joint, $10\frac{2}{10}$ inches; tail, $6\frac{6}{10}$ inches; tarsi, $2\frac{1}{2}$ inches; bill, 1 inch; to the angle of the mouth, $1\frac{1}{10}$ inches.

Our plate represents an adult female, and a young male, reduced to one-third less than the natural size.

ASTER BIFASCIATUS.—(Nob.)

Plate XX.

Collection Exp. Exp.

A. dorso sepiaco; capite saturatiori, maculâ nuchali lineâque superciliari obscuris: alis sepiacis, umbrino fasciatis; scapis brunneis; subtùs flavescenti-albis, fasciis umbrinis conspicuè notatis: caudâ alis pallidiore, fasciis quatuor brunneis insigniter depictâ, plumas binas extimas fasciis duplo pluribus notantibus; scapis, in intervallo fasciarum, albis: gutture pectoreque albis, medio cujusque plumæ lineâ brunneâ longitudinaliter notato: abdomine, lateribus femoribusque albis, brunneo fasciatis, ferrugineo tinctis: crisso albo: rostro unguibusque fusco-brunneis: cerâ tibiisque furvescenti-flavis.

Back sepia-brown; head darker, with an obscure white nuchal spot, and superciliary line. Wings sepia-brown, banded with umber; shafts brown; beneath yellowish-white with conspicuous brown bands; tail lighter than the wings, and having four conspicuous brown bands, the two outer feathers with double the number (whence our name); shafts between the bars white; throat and breast white, the feathers having a brown line along the centre of each; belly, flanks, and thighs white, banded with brown, and tinged with ferruginous; under tail coverts white; bill and claws dark brown; cere and legs dusky yellow.

Total length, $12\frac{7}{10}$ inches; wings, from the carpal joint, $7\frac{7}{10}$ inches; tail, $5\frac{1}{2}$ inches; tarsi, $1\frac{8}{10}$ inches; middle toe, including the nail, $1\frac{6}{10}$ inches; nail, $\frac{4}{10}$ inch; hind toe, including the nail, $1\frac{1}{2\,0}$ inches; nail, $\frac{1}{2}$ inch.

The species inhabit the Peninsula of Malacca; our specimens were obtained at Singapore.

HALIÆETUS LEUCOCEPHALUS.—(L.)

Bald Eagle. *Falco leucocephalus.* Wilson, Am. Orn., vol. iv. p. 89.
White-headed, or Bald Eagle. *Haliaetus leucocephalus.* Audubon, Birds of America, vol. i. p. 57.
Aquila (*Haliæetus*) *leucocephalus.* Richardson, Fauna Bor. Am., vol. ii. p. 15.

Collection Exp. Exp.

Eagles are numerous on the Northwest Coast of America; they are particularly so along the banks of the Columbia River, where fish, their favourite food, is plentiful at all seasons. The young birds vary so much in both size and colour, that many persons are led to believe there are several different species inhabiting that country; but after examining numerous specimens from Oregon and other parts of our western coast, we have not been able to find characters to prove the existence there of more than two species: the War-eagle of the Indian traders (*Aquila chrysaëtus?*), and the subject of the above notice, which we have seen to inhabit most parts of our continent where fish are abundant.

PANDION HALIÆETUS.

Osprey. *Falco haliæetus.* Lath. Gen. Hist. of Birds, vol. i. p. 58.
Fish-hawk, or Osprey. *Falco haliætus.* Wilson, Am. Orn., vol. v. p. 1.
Aquila (*Pandion*) *haliœeta.* The Osprey. Richardson, Fauna Bor. Am., vol. ii. p. 20.
Fish-hawk, or Osprey. *Pandion haliætus.* Audubon, Birds of Am., vol. i. p. 64.

Fish-hawks are abundant along the coasts of Oregon and California, though not as numerous as on the Atlantic coast. On the Columbia River, it appeared to us that they were annoyed by the great numbers of eagles, which are constantly plundering them of their food, and in consequence they are obliged to seek more retired fishing ground.

STRIGIDÆ.

STRIX AMERICANA.—(Aud.)

Barn Owl. *Strix Americana.* Audubon, Birds of Am., vol. i. p. 127.
White, or Barn Owl. *Strix flammea.* Wilson, Am. Orn., vol. vi. p. 57.

Collection Exp. Exp.

Mr. Audubon, in describing this species, says, "Closely allied to *Strix flammea*, but larger, and differing somewhat in colour, being generally darker, with the ruff red."—"A character by which they may always be distinguished is found in the operculum, the feathers margining which, are in the present species reduced to their tubes, the shafts and filaments being wanting, whereas in the European species, each tube bears a very slender shaft, about half an inch long, and furnished with about half a dozen filaments on each side."

A specimen obtained in Oregon is of a tawny colour, with a very dark ruff, and agrees with Mr. Audubon's description generally; but in the essential character of the "elliptical or obovate feathers" on the operculum, it agrees best with the European species; it is apparently an adult and full-plumaged bird, and on comparison with a younger specimen taken in the District of Columbia, presents no characters which are materially different; the young bird is lighter coloured and has not so dark a ruff, but has the plumes on the operculum equally developed.

Two specimens were obtained by the Expedition in Brazil, one light, the other dark-coloured; both have the plumes on the operculum, but the dark-coloured specimen, which from analogy we suppose to have been the oldest bird, has many of the plumes on the operculum broken.

A pair built their nest and raised a brood of young in one of the ship-houses at the Navy Yard in the city of Washington.

STRIX LULU.—(Nob.)

PLATE XXI.

Lulu of the Samoans.

Collection Exp. Exp.

S. antecedenti similis, at minor, colore pallidior, necnon et alis brevioribus: summo capite, collo, dorso, alis caudâque supernâ grisescentibus, brunnescenti-variegatis, nonnihil fulvo contínctis: plumis caudæ singulis apice guttâ nigrâ notatis, medio albis: caudâ ex duodecim conflatâ plumis, singulas fasciis quatuor ornantibus, ex fasciis autem tribus tantùm subtùs conspiciendis: alis similiter fasciatis: gutture, pectore, abdomine, femoribus partibusque omnibus subjacentibus, alis caudâque inclusis, albis: guttulis paucis nigris super tegmina alarum inferiora, pectus lateraque conspersis: femorum tarsorumque plumis candidis, haud densis: iride saturatè brunneâ: rostro tibiisque palidè carneis, hisce squamis brunneis contectis.

Like the foregoing, but smaller; lighter coloured, and having shorter wings. Top of the head, neck, back, upper surface of the wings and tail, light gray, mottled with pale brown, and having a slight tinge of tawny; the tip of each feather of the dorsal plumage having a black spot with a white centre; tail consisting of twelve feathers, each with four brown bars, three only of which show on the under surface; wings barred like the tail; throat, breast, belly, thighs, and all the under parts, including the wings and tail, white; a few small black spots scattered over the under wing coverts, breast, and flanks; plumage of the thighs and tarsi pure white, and not so full, nor descending as low as it does on the American species; irides dark brown; bill and legs pale flesh-colour; the latter covered with brown scales.

Total length, $12\frac{3}{4}$ inches; extent of wings, $34\frac{1}{4}$ inches; wings, from the carpal joint, $11\frac{4}{10}$ inches; tail, $4\frac{3}{10}$ inches; tarsi, $2\frac{1}{4}$ inches; mid-

dle toe, including the nail, $1\frac{19}{20}$ inches; nail, $\frac{7}{10}$ inch; hind toe, including the nail, $1\frac{4}{10}$ inches; nail, $\frac{7}{10}$ inch. Female.

This species is quite common at the island of Upolu, and other islands of the Samoan Group. It is frequently abroad during the day, and flies with ease and almost perfect silence; we obtained numerous specimens, which vary but little: some are light-gray above, and snow-white beneath, while others are pale tawny above, but having also white breasts.

A single specimen was obtained at the island of Ovolau, one of the Feejee Group.

OTUS BRACHYOTUS.—(L.)

Strix brachyotus. Wilson, Am. Orn., vol. iv. p. 64.
Otus brachyotus. Audubon, Birds of America, vol. i. p. 140.

This bird is not uncommon on the prairies of Oregon and California. We found them on each of the Hawaiian islands, and the specimens from there, when compared with those of Europe and America, could not be distinguished, unless, as it appeared to us, in being smaller; but in habits they are alike. They frequent grassy or reedy plains, or marshes where there are but few trees.

NOCTUA VENATICA.—(Nob.)

Plate XXII. Fig. 1.

Collection Exp. Exp.

N. supernè umbrina: frontis eâ parte quæ oculis interjacet albâ: genis brunneis: cervicis plumis bimaculatis, maculis pallidè ochraceis; dorsi, quadrimaculatis, notis hisce omnibus, quin plumæ eleventur, non discernendis: gutture, pectore, ventre anoque pallidè luteolis, quâvis plumâ per medium brunneo lineatâ; abdominis insuper plumis ma-

culis binis albis versùs extremitatem notatis: crisso fulvo, guttâ umbrinâ propè apicem cujusque plumæ; plumis omnibus ad basin saturatè plumbeis: tarsos plumulis fulvo-rufis cooperientibus, umbrino fasciatis: digitis flavis, quos setæ fusco-brunneæ contegunt: unguibus intensè fuscis, parvis, valdè acutis: rostro olivaceo-viridi: iride flavâ: alis fusco-brunneis; basi remigum fasciis albis depictâ, versùs summitatem pennarum pallescentibus; remige quartâ longissimâ; rhachibus fusco-brunneis; tectricibus subjacentibus luteolis, brunneo variegatis: caudâ ex duodecim constitutâ plumis, rotundatâ, pogoniis internis fasciis sex albis angustisque connotatis, superiùs vix apparentibus, subtùs autem et juxta basin conspicuis, gradatim versùs apicem pallescentibus.

Above, umber-brown; front between the eyes white; cheeks brown; feathers of the neck bimaculate, the spots pale ochre; dorsal feathers, with four white spots, none of them visible without raising the feathers; throat, breast, belly, and vent pale buff, each feather having a brown line along the middle, and those of the belly having in addition two white spots near their extremities; under tail coverts tawny, with an umber spot near the end of each feather; all the plumage dark lead-coloured at the base; tarsi covered with tawny rufous plumage banded with umber; toes yellow, covered with dark brown bristles; claws dark brown, small, and very sharp; bill olive-green; irides yellow; wings dark brown, with white bands at the base of the quills, the bands becoming obscure towards their extremities; fourth quill longest, shafts dark brown; under coverts buff, mottled with brown; tail consisting of twelve feathers, rounded, and having six narrow white bars on the inner webs, which are scarcely visible on the upper surface, but conspicuous beneath and near the base, gradually becoming obscure towards the extremity.

Total length, $11\frac{8}{10}$ inches; wing, from the carpal joint, $7\frac{9}{10}$ inches; tail, $4\frac{9}{10}$ inches; tarsi, $1\frac{3}{20}$ inches; middle toe, including the nail, $1\frac{7}{20}$ inches; nail, $\frac{4}{10}$ inch; hind toe, $\frac{3}{4}$ inch; nail, $\frac{7}{20}$ inch; bill, $\frac{7}{10}$ inch. Female.

They are common at the Bay of Islands, New Zealand, and their "hoot" may be heard almost nightly. In the day they seek the deep recesses between the hills, and sit quietly ensconced in the thick

foliage, waiting the return of night, unless disturbed by the "Hi-waka-waka," a beautiful fan-tail fly-catcher (*Muscicapa flabellifera*, Gm.), which is there very common and tame, but a great annoyer of the day slumbers of this little owl.

Sub-genus ATHENE.—(Bonaparte.)

This entire sub-genus, as far as opportunities were offered to observe the species during the progress of the Expedition, was found to be *diurnal*, and their food to consist almost entirely of insects and lizards, but principally the former. The species are sufficiently distinct, but it is almost impossible to lay down any definite characters, by which they can be known at once. They all avoid the forests, and live entirely in the pampas or prairies.

ATHENE CUNICULARIA.—(Molina.)

Strix cunicularia. Molina, History of Chili.
Coquimbo Owl. Lath. Gen. Hist. of Birds, vol. i. p. 365.
Audubon's Birds of America, vol. i. pl. 31, lower figure.
Strix Californica. Audubon, Folio, Plate ccccxxxii. fig. 2, which we are informed was drawn from a specimen obtained in Chili, by Mr. J. K. Townsend.

Collection Exp. Exp.

Feathers of the head and neck having one web brown, the other white or very pale tawny, which gives those parts a lineated and spotted appearance. These birds were seen frequently in the vicinity of Callao, Peru, and we think offer sufficient specific differences from those obtained in Patagonia, by having shorter tails, longer tarsi, white spotted plumage, and in having the outer tail-feathers brown, with bars of pale tawny, instead of white with brown bars. In all cases where we observed them, it appeared that they excavated their own holes; these were, in almost every instance, on the sides of mounds formed by the crumbling remains of the ancient Inca temples, or

dwellings. Around the entrances were seen numerous fragments of grylli and coleopterous insects, and in the stomachs of those killed were found similar fragments, but none of birds or mice.

ATHENE HYPUGÆA.—(Bonaparte.)

Strix cunicularia. Long's Expedition to the Rocky Mountains, vol. ii. p. 36.
Burrowing Owl. *Strix cunicularia.* Bonaparte, Am. Orn., vol. i. p. 68.
Burrowing Owl. *Surnia cunicularia.* Audubon, Birds of America, vol. i. p. 119.

Feathers of the head and neck brown, without lines or spots of white.

This species is well known on all the great prairies east of the Rocky Mountains, and was observed on the Columbia River above the mouth of the Wallawalla, but was not found on the coast, or in the country lying between the Columbia River and California.

The only specimen we have remaining for comparison, differs from those observed east of the Rocky Mountains, by having the feathers of the breast a plain pale buff-colour, without bars, and in being smaller: a difference quite sufficient to constitute a species, if constant; the proof for which requires more specimens than we have access to at present. The name *Hypugæa* is here adopted upon the suggestion of the Prince of Musignano, in his continuation of the American Ornithology, vol. i. p. 72.

ATHENE PATAGONICA.—(Nob.)

Plate XXII. Fig. 2.

Collection Exp. Exp.

A. desuper brunnea, fulvo maculata; subtùs luteola, fasciis brunneis pectus lateraque transversim connotantibus: tectricibus alarum minoribus umbrinis, radiis externos guttis flavidis binis, internos verò unâ,

ornantibus: remigum tertiâ longissima; primâ quintæ æquali; pogoniis externis brunneis, quæ fasciis sex fulvis transnotantur; pogoniis autem interioribus lutescentibus, versùs summitatem brunneis: plumis alarum subtùs fasciâ nigrâ ad basin instructis, aliàs penitùs flavido-albis: caudâ, si binas extimas rectrices excipias, brunneâ, apice albido, fasciis quinis fulvescentibus instructâ; externis verò flavescenti-albis, maculis tribus brunneis radios externos, internos, unâ, connotantibus; subtùs flavescenti-albâ; fasciis obscuris: rostro cum pedibus virescenti-flavo: iride flavâ.

Above, brown, spotted with tawny; beneath, pale buff, with brown bars crossing the breast and flanks; lesser wing-coverts umber-brown, with two buff-coloured spots on the outer, and one on the inner web; third quill longest, first and fifth equal; outer webs brown, crossed by five fulvous bands; inner webs pale buff, except towards the extremities, where they are brown; a black band crosses at the bases of the quills, otherwise the whole wing beneath is of a yellowish-white; tail, excepting the two outer feathers, brown, with a whitish tip and five fulvous bars; outer feathers yellowish-white, with three brown spots on the outer web, and one on the inner web; beneath yellowish-white, the bars obscure; bill and feet greenish-yellow; irides yellow.

Total length, $10\frac{7}{10}$ inches; wing, from the carpal joint, $7\frac{9}{10}$ inches; tail, $3\frac{1}{2}$ inches; tarsi, $1\frac{3}{4}$ inches; middle toe, including the nail, $1\frac{2}{10}$ inches; nail, $\frac{1}{2}$ inch; hind toe, including the nail, $\frac{8}{10}$ inch; nail, $\frac{4}{10}$ inch; bill, $\frac{7}{10}$ inch.

Should the traveller who has crossed the prairies of the Arkansaw and Missouri Rivers, ever visit Patagonia, he will find in that country many points of striking analogy to the interior of North America. The face of the country (pampas, being prairies under a different name) bears a strong resemblance; cavies take the place of hares. Larks (*Sturnus militaris*), like those of the north, are seen, having red instead of yellow breasts (*Sturnus Ludovicianus*), but alike in *voice* and habits. Every now and then, too, he will meet with subterranean "villages," or little societies of Armadillos (*Dasypus minutus, Desm.*), whose social habits and abode are like the "Prairie Dog" (*Artomys Ludovicianus*, Ord.), a species of *Marmot*, of the northern hemisphere. In these societies of Armadillos, there may be

heard a kind of barking, like that produced by some of the German toy dogs,—the same sound which has given to our *Marmot* the name of "Prairie Dog" by the French voyageurs. This cry, in Patagonia, was found to proceed from an Owl, so like that of the prairies of North America, that we fear it is not possible to convince all our readers that they are really different.

The Patagonian Owl seldom or never alights on trees; it is only found in the pampas, and there inhabits the holes of the Armadillo. Its food, by dissection of the birds we shot, was found to be insects and lizards, both of which are abundant in that region. The most perfect harmony seemed to exist between the Owls and Armadillos, whose deserted holes only we suppose they take possession of, and there build their nests, and raise their brood undisturbed. They are found abroad during the day in the open pampas, under an unclouded sun; and when we were watching in the evening for their quadruped companions, which are much esteemed for the table, we found that the Owls had all retired to their holes; hence we conclude them to be, strictly speaking, diurnal.

A table is subjoined of measures taken from the different species of this sub-genus, which show that there is no great difference in their size.

Sub-genus ATHENE.—Bonaparte.	Cunicularia. Peru. ♀	Hypugæa. Missouri ♂	Patagonica.	Hypugæa. Oregon.	Grallaria. Temm. ♂
	In. 10ths.	In. 10ths.	In. 10ths.	In. 10ths.	In. 10ths.
Total length, ...	11	9 $\frac{1}{2}$	10 7	9 1	9
Wing, from the carpal joint, .	7 3	7 3	7 9	7 3	
Tail, ...	2 8		3 $\frac{1}{2}$	2 9	
Bill, ...	7		7	6	
Tarsi, ...	1 $\frac{17}{20}$	1 7	1 $\frac{3}{4}$	1 6	2
Middle toe, nail included, . .	1 1	1 $\frac{3}{20}$	1 2	1	
Nail, ...	$\frac{9}{20}$	$\frac{9}{20}$	$\frac{1}{2}$	4	
Hind toe, nail included, . . .	7	8	8	$\frac{1}{2}$	
Nail, ...	4	$\frac{7}{20}$	4	$\frac{7}{20}$	

INSESSORES.

DENTIROSTRES.

LANIADÆ.

COLLURICINCLA MACULOSA.—(Nob.)

PLATE XXIII. FIG. 1.

Collection Exp. Exp.

C. vertice occipiteque nigris, plumis nonnihil virescenti-irescentibus; frontalibus modicè albo marginatis: superciliis, colli lateribus, gutture, pectore, tectricibus alarum inferioribus, crisso partibusque omnibus subjacentibus, albis: plumarum basi plumbeâ: lineâ nigrâ ex anteriori parte oculi ad occiput usque sese extendente: dorso tectricibusque minoribus alarum nigris: uropygio cineraceo, nigricanti obnubilato: alis acuminatis, remige primâ angustâ, quam secunda longitudine duplo superat; tertiâ quartâque æqualibus et longissimis; nigris: pogoniis internis, secundùm dimidium basale, albis; margine exteriori flavescenti-albis: tegminibus alarum majoribus, albis, lineâ medianâ nigrâ acuminatâque notatis: caudâ rotundatâ, nigrâ; ad apicem albâ, intermediis quidem minùs insignitèr albo notatis; extimis verò ad medium usque albo marginatis: rostro pedibusque nigris: iride brunneâ. Mas adultus.

Crown and occiput black, with a slight greenish gloss; frontal feathers slightly edged with white; brow, sides of the neck, throat, breast, under wing coverts, under tail coverts, and all the lower parts, white; the feathers lead-coloured at their roots; a black line runs from the front of the eye to the occiput: back and lesser wing coverts black; rump cinereous, clouded with black; wings pointed,

the first quill narrow, and but half the length of the second; third and fourth equal, and longest; black; basal half of the inner webs white, the outer edges margined with yellowish-white; greater wing coverts white, with a pointed black line down the middle: tail rounded, black, tipped with white, but slightly on the middle feathers, the outer ones margined with white half their length: bill and feet black: irides brown. Adult male.

Total length, $7\frac{2}{10}$ inches; wing, from the carpal joint, $4\frac{3}{10}$ inches; tail, $2\frac{8}{10}$ inches; tarsi, 1 inch; middle toe, including the nail, $\frac{8}{10}$ inch; nail, $\frac{1}{4}$ inch; hind toe, including the nail, $\frac{6}{10}$ inch; nail, $\frac{1}{4}$ inch; bill, $\frac{1}{2}$ inch; to the corner of the mouth, $\frac{8}{10}$ inch.

Young birds differ from the adults in being of an umber-brown colour above, and in having numerous black waved lines across the breast and abdomen.

Their voice is a shrill whistle, and they mostly frequent open grounds, where there are a few scattered pandanus trees, which they seem to prefer; it is a common species on all the islands of the Feejee Group. One specimen was obtained at Upolu, one of the Samoan Islands.

OCYPTERUS LEUCHORHYNCHUS.—(Horsf.)

Griffith's Cuvier, vol. vi. p. 287.

Collection Exp. Exp.

Specimens, agreeing with the descriptions of this bird, were obtained in New South Wales, and at the island of Mangsi in the Indian Ocean; they do not differ materially from each other.

OCYPTERUS SUPERCILIOSUS.—(Nob.)

PLATE XXIII. FIG. 2.

Collection Exp. Exp.

O. capite colloque cæruleo-nigris, versùs dorsum pallidioribus: lineâ superciliari albâ ex oculi parte anticâ ad occiput usque tendente: dorso ardesiaco: alis caudâque pallidè ardesiacis, subtùs albis; hujus apice albo: crisso corporeque lætè castaneis: tibiis nigris: rostri cærulei apice nigro.

Head and neck blue-black, becoming lighter towards the back; a white superciliary line runs from the front of the eye to the occiput; back, slate-colour; wings and tail light slate-colour, white beneath, and the tail tipped with white; body and under tail coverts bright chestnut; legs black; bill blue, with a black tip.

Total length, $7\frac{7}{10}$ inches; wings, from the carpal joint, $5\frac{3}{10}$ inches; tail, $3\frac{2}{10}$ inches; tarsi, $\frac{7}{10}$ inch; middle toe, including the nail, $\frac{17}{20}$ inch; nail, $\frac{1}{4}$ inch; hind toe, $\frac{6}{10}$ inch; nail, $\frac{2}{10}$ inch; bill, $\frac{7}{10}$ inch; to the angle of the mouth, $\frac{19}{20}$ inch.

A single specimen was obtained in New South Wales.

OCYPTERUS MENTALIS.—(Nob.)

PLATE XXIII. FIG. 3.

Collection Exp. Exp.

O. capite, gutture, dorso, alis caudâque, nigris: uropygio, crisso partibusque omnibus inferioribus, albis: ad caudam apice tenui albo: pedibus fusco-plumbeis: rostro cæruleo: iride brunneâ.

Head, throat, back, wings, and tail, black; rump, under tail coverts, and all the under parts, white; a narrow white tip to the tail; feet dark lead-colour; bill blue; irides brown.

Total length, $8\frac{1}{8}$ inches; extent of wings, $14\frac{3}{4}$ inches; wings, from the carpal joint, $5\frac{4}{10}$ inches; tail, $2\frac{8}{10}$ inches; tarsi, $\frac{7}{10}$ inch; middle toe, including the claw, $\frac{8}{10}$ inch; claw, $\frac{3}{10}$ inch; hind toe, $\frac{6}{10}$ inch; claw, $\frac{3}{10}$ inch; bill, $\frac{8}{10}$ inch; to the angle of the mouth, $1\frac{1}{10}$ inch. Female.

Both sexes are alike in plumage, and can hardly be distinguished from each other; the males, however, are a trifle the larger. They inhabit all the islands of the Feejee Group, and are found only in such places as are not covered with trees or bushes; in open grounds they may be seen, sitting on a dead branch of some solitary tree, patiently watching for grasshoppers, on which they generally feed; sometimes they will start in pursuit of insects on the wing, and at such times their movements and appearance are those of a swallow, with this difference, that they frequently hover or flutter over one particular spot, and plunge into the grass, like "Kingfishers" do into the water. We sometimes saw them in companies of three or four, but more frequently solitary.

MERULIDÆ.

TURDUS MIGRATORIUS.—(L.)

Robin. *Turdus migratorius.* Wilson, Am. Orn., vol. i. p. 35.
American Robin, or Migratory Thrush. *Turdus migratorius.* Audubon, Birds of America, vol. iii. p. 14, pl. 142.

Collection Exp. Exp.

Robins are quite common on the West Coast of America; they were frequently seen by the members of the Expedition, from the Columbia River to the Bay of San Francisco in California.

TURDUS FALKLANDICUS.—(Quoy and Gaimard.)

Grive des Malouines. Turdus Falklandicus. Quoy et Gaimard, Zool. de Uranie, p. 104.
Turdus Falklandicus. Darwin, Zool. of the Beagle, part iii. p. 59.

The young of this species were found at Orange Bay, Tierra del Fuego, to be just fully grown in the month of February. Their size, voice, and general appearance are so much like the Robin of North America, that few of our officers could be persuaded they were not identical. In Chili, where it is also found, they are said to line their nests with mud; the young are also spotted on the breast and neck until the first moult, making the analogy still more striking.

TURDUS PALLIDUS.—(Nob.)

PLATE XXIV. FIG. 1.

Collection Exp. Exp.

T. verticis, colli dorsique plumis, cinerascenti-brunneis; gutturis, albis, pallidè brunneo lineatis; pectoris, abdominis caudæque subtùs, pallidè cinereis, in medio obscurioribus: alis caudæque parte superiori, cinerascenti-brunneis: tegminibus alarum majoribus ferrugineo marginatis: remigum quartâ quintâque æqualibus et longissimis, secundâ duplo longiore quam prima: caudâ ex duodenis constitutâ plumis, ferè æquatâ; rhachibus albis: iride brunneâ: rostro nigro: tibiis corneis.

Crown, neck, and back, ashy-brown; throat white, lineated with pale brown; breast, abdomen, and under part of the tail, pale ash-colour, the feathers having a darker centre; wings, and upper part of the tail, ashy-brown; greater wing coverts margined with ferruginous; fourth and fifth quills equal, and longest; first, half the length of the second; tail consisting of twelve feathers, nearly even at the end; shafts white; irides brown; bill black; legs horn-colour.

Total length, $9\frac{7}{10}$ inches; wing, from the carpal joint, $5\frac{3}{10}$ inches; tail, $4\frac{2}{10}$ inches; tarsi, $1\frac{3}{20}$ inch; middle toe, including the claw, $\frac{9}{10}$ inch; claw, $\frac{3}{10}$ inch; hind toe, including the claw, $\frac{7}{20}$ inch; bill, $\frac{7}{10}$ inch; to the angle of the mouth, $1\frac{1}{20}$ inch.

Our specimen was obtained in the month of May, near Valparaiso; its actions were like the Robin of North America (*Turdus migratorius*), to which its voice also had a distant resemblance, and whenever it uttered its call-note, it was attended with a jerk of the tail, in the characteristic manner of the northern Robin.

TURDUS VANIKORENSIS.—(Quoy and Gaimard.)

Merle de Vanikora. Turdus Vanikorensis. Quoy et Gaimard, Voyage de L'Astrolabe. Zool., tom. i. p. 188, pl. 7.

Collection Exp. Exp.

Near the village of Alua, which is in the interior of the island of Upolu, we obtained a male specimen in full plumage, on the 5th of November; it does not differ materially from the figure in the Zoological Atlas to the voyage of the Astrolabe, excepting in size, ours being somewhat larger, and of a uniform deep-black colour, without the white bars on the under wing, and under tail coverts. It inhabits the shady and retired parts of the forests of the Samoan Islands, and is said to sing with a powerful and sweet voice.

MIMUS PERUVIANUS.—(Nob.)

Plate XXIV. Fig. 2.

Collection Exp. Exp.

M. capitis, dorsi, scapularibus uropygiique plumis pallidè umbrinis, in medio saturatioribus; gutturis, albis; pectoris, abdominis, hypochondriorumque perpallidè umbrinis, singulis in medio lineatis umbrino, albo marginatis: alis umbrinis: primariis ad basin maculâ albâ insignibus: caudâ umbrinâ, apice rufescenti-albo. Femina.

Head, back, scapulars, and rump, pale umber-brown, the feathers darker in the middle; throat white; breast, abdomen, and flanks, very pale umber, the feathers each with a dark umber line in the middle, and white edges; wings umber, a white spot at the base of the primaries; tail umber, tipped rufous-white. Female.

Total length, $10\frac{8}{10}$ inches; wing, from the carpal joint, 5 inches; tail, $5\frac{1}{2}$ inches; tarsi, $1\frac{1}{20}$ inch; middle toe, including the claw, $1\frac{2}{10}$ inch; claw, $\frac{3}{10}$ inch; hind toe, $\frac{9}{10}$ inch; claw, $\frac{4}{10}$ inch; bill, $\frac{8}{10}$ inch; to the angle of the mouth, $1\frac{2}{10}$ inch.

This bird was found near Callao, in Peru, during the month of July; it has the manners and vivacity of the North American Mocking Bird, but not its full powers of song. The conspicuous white spots on the wings, give it more the appearance of ours, than the Chilian species (*M. thenca*, of G. R. Gray), which has no wing-spot, but the white tip to the tail keeps up its southern alliance.

THRYOTHORUS OTATARE.—(Less.)

Sitta otatare. Lesson, Voy. de la Coquille, Zool., t. i. pp. 2, 666, pl. 23, fig. 2, (1828.)
Thryothorus luscinius. Quoy et Gaimard, Voy. de l'Astrolabe, Zool. tom. i. p. 202, pl. 5, fig. 2 (1830).
Collection Exp. Exp.

We obtained specimens of this variable species, at the Paumotu Group of islands, at Tahiti, at the Samoan Islands, at Tongatabu, and sundry other places in the South Pacific Ocean. It is the most widely spread of all the Polynesian land-birds. The most usual colour is pale buff beneath; brown wings and tail, the feathers of the latter tipped with buff; and the back and head mottled with brown and buff. We have not seen any two specimens exactly alike: they vary from a chocolate-brown to white; in fact they vary in markings, colour, and size, almost as much as domestic poultry; but their sprightly wren-like actions, and sweet song, are the same in all. They frequent close bushy patches of vegetation, and sometimes reedy marshes; are difficult to shoot, unless the hunter excites their curiosity, when they will expose themselves.

PITTA CORONATA.—(Nob.)

Plate XXIV. Fig. 3.

Collection Exp. Exp.

P. vertice castaneo, lineâ mediali nigrâ notato: genis, palpebris, gutture colloque, nigris: dorso, scapularibus tectricibusque alarum majoribus, viridibus: pectore hypochondriisque viridibus, dorso tamen pallidioribus: maculâ ventris intensè coccineâ; crisso quoque coccineo, illâ pallidiore: caudâ rotundatâ, brevi, nigrâ, intermediis parcè viridi ad apicem imbutis; tegminibus superioribus uropygioque pallidè argenteolo-cæruleis: alis rotundatis, brevibus; remigum secundâ tertiâque æqualibus, longissimis; primariis, utrâque extremitate, nigris, medio albis: secundariis, pogonio interno, nigris; externo, cæruleo-viridibus: tegminibus alarum minoribus dilutè argenteolo-cæruleis; inferioribus, nigris: rostro nigro: rictu flavo: tibiis rubidis.

Crown chestnut, with a black line in the middle; cheeks, eyelids, throat, and neck, black; back, scapulars, and greater wing-coverts, green; breast and flanks green, of a lighter shade than the back; ventral spot bright scarlet; under tail coverts paler scarlet; tail rounded, short, black, the central feathers slightly tipped with green; upper coverts and rump light silvery blue; wings rounded, short, second and third quills equal and longest; primaries black at each end, and white in the middle; secondaries black on the inner web, blue-green on the outer; lesser coverts light silvery blue; under coverts black; bill black, the corners of the mouth yellow; legs reddish.

Total length, $6\frac{9}{10}$ inches; wing, from the carpal joint, $4\frac{8}{10}$ inches; tarsi, $1\frac{4}{10}$ inch; middle toe, including the claw, $1\frac{1}{4}$ inch; claw, $\frac{3}{10}$ inch; hind toe, $\frac{9}{10}$ inch; claw, $\frac{1}{2}$ inch; bill, $\frac{8}{10}$ inch; to the angle of the mouth, $1\frac{1}{10}$ inch.

Inhabits the Peninsula of Malacca; we obtained a single specimen at Singapore.

SYLVIADÆ.

SAXICOLA ŒNANTHE.—(L.)

Wheat-ear Warbler. *Sylvia œnanthe.* Latham, Gen. Hist. of Birds, vol. vii. p. 52.

Collection Exp. Exp.

A male specimen, in beautiful condition, flew on board the U. S. Ship Peacock, on the 19th of October, in latitude 6° 50′ N., longitude 21° 38′ W. of Greenwich. It was captured, but refusing the kind of food we were able to offer, it died soon afterwards.

SAXICOLA FUMIFRONS.—(Nob.)

PLATE XXV. FIG. 1.

Collection Exp. Exp.

S. collo dorsoque olivaceo-cinereis: pectore, abdomine, plumis ani crissique pallidè cinereis, vix non albis: capite guttureque fuliginosis, hoc in ferrugineum vergente: alis fusco-brunneis; remigibus tegminibusque olivaceo marginatis: partibus subjacentibus pallidè cinereis: caudâ æquatâ, ferè nigrâ, rectricibus binis extimis albo marginatis: rostro fusco-brunneo: tibiis tenuibus nigrisque.

Neck and back olive ash-colour; breast, abdomen, vent, and under tail coverts, pale ash-colour, nearly white; head and throat fuliginous; the throat inclining to ferruginous; wings dark brown, the quills and coverts edged with olive; under parts light ash-colour; tail

even, nearly black, the two outer feathers edged with white; bill dark brown; legs slender, black.

Total length, $6\frac{9}{10}$ inches; wing, from the carpal joint, $4\frac{3}{10}$ inches; tail, $2\frac{7}{10}$ inches; tarsi, $1\frac{1}{10}$ inch; middle toe, including the claw, $\frac{8}{10}$ inch; claw, $\frac{1}{4}$ inch; hind toe, $\frac{6}{10}$ inch; claw, very slender, $\frac{7}{20}$ inch; bill, $\frac{4}{10}$ inch; to the angle of the mouth, $\frac{8}{10}$ inch. Female.

Found on arid grounds near Callao, Peru, in the month of July.

SIALIA OCCIDENTALIS.—(Townsend.)

Western Bluebird. *Sialia occidentalis.* Audubon, Birds of America, vol. ii. p. 176.

Collection Exp. Exp.

SIALIA ARCTICA.—(Swainson.)

Erythaca (*Sialia*) *arctica.* The Arctic Bluebird. Swainson, Fauna Bor. Am., vol. ii. p. 209, pl. 39.

Collection Exp. Exp.

Both the above species of Sialia were obtained in Oregon, and were observed to inhabit the western coast of our continent generally, but the common "Bluebird," (*Sialia Wilsonii*,)* was not seen there.

* Swainson, Zool. Journal, vol. iii. p. 173.

PETROICA COCCINEA.—(Nob.)

PLATE XXV. FIG. 2.

Scarlet-bellied Flycatcher? Latham, Gen. Hist. of Birds, vol. vi. p. 210.

Collection Exp. Exp.

P. capite, dorso, alis caudâque cinerascenti-nigris: tectricibus alarum minoribus, fasciâ remigum, tertiariarumque margine externo, albis: lineâ albâ extimam caudæ plumam secundùm totam longitudinem notante: maculâ albâ ad basin mandibulæ superioris: guttâ mentali cineraceâ: gutture, pectore, abdomineque coccineis: tectricibus subjacentibus alarum caudæque, albis: iride brunneâ: rostro tibiisque nigris.

Head, back, wings, and tail, ashy-black; lesser wing coverts, bar across the quills, and outer edge of the tertials, white; a longitudinal white line extending the whole length of the outer tail feathers; a white spot at the base of the upper mandible; chin-spot cinereous; throat, breast, and abdomen, scarlet; under coverts of the wings and tail white; irides brown; bill and legs black.

Total length, $5\frac{1}{10}$ inches; wing, from the carpal joint, $3\frac{4}{10}$ inches; tail, $2\frac{2}{10}$ inches; tarsi, $\frac{8}{10}$ inch; middle toe, including the claw, $\frac{7}{10}$ inch; claw, $\frac{2}{10}$ inch; hind toe, $\frac{1}{2}$ inch; claw, $\frac{1}{4}$ inch; bill, $\frac{4}{10}$ inch; to the angle of the mouth, $\frac{13}{20}$ inch.

Our specimens were obtained near Sydney, New South Wales, in the month of December. At the same season specimens were obtained of P. multicolor (*Muscicapa multicolor*, Gm.), and P. Lathami (*Muscicapa Lathami*, Vigor's Zool. Journal, vol. i. p. 410, pl. 13).

PETROICA PUSILLA.—(Nob.)

PLATE XXV. FIG. 3.

Collection Exp. Exp.

P. capite, gutture dorsoque nigris: alis caudâque fusco-brunneis: tectricibus alarum majoribus ad medium usque albis: remigum scapis brunneis: alis haud fasciatis: caudæ plumis binis extimis ex utroque latere albo fasciatis, apice albis: pectore coccineo, abdomine item, sed pallidiore: ani plumis crissoque albis: rostro nigro: iride brunneâ: tibiis flavescentibus: guttulâ frontali albâ.

Head, throat, and back, black; wings and tail dark brown; greater wing coverts half white, quill-shafts brown; wings without a bar; tail having a white bar and tip to the two outer feathers, each side; breast scarlet; abdomen paler scarlet; vent and under tail coverts, white; bill black; irides brown; legs yellowish; a small frontal spot of white.

Total length, $3\frac{3}{4}$ inches: wings, from the carpal joint, $2\frac{1}{2}$ inches; tail, $1\frac{1}{2}$ inch; tarsi, $\frac{7}{10}$ inch; middle toe, including the claw, $\frac{11}{20}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{1}{2}$ inch; nail, $\frac{2}{10}$ inch; bill, $\frac{7}{20}$ inch; to the angle of the mouth, $\frac{13}{20}$ inch.

This species bears a close resemblance to *P. multicolor*, but is smaller than it, and has shorter wings: it is not uncommon at the Samoan Islands, particularly at Upolu, where we found them frequenting the undergrowth in thick shady forests, exhibiting most of the habits of flycatchers.

REGULUS PLUMULOSUS.—(Nob.)

PLATE XXV. FIG. 4.

Collection Exp. Exp.

R. plumis mollissimis texturâque solutissimis: cristâ, summo capite, genisque, nigris, frontalibus angustè albo marginatis: collo postico cineraceo: dorso olivaceo-griseo: gutture, necnon et pectore, albis: abdomine pallidè flavo: lineâ mediali nigrâ plumas longitudinaliter notante: ani plumis crissoque pallidè stramineis: alis fusco-olivascenti-brunneis; primariis, secundariis tertiariisque squalidè albo marginatis: caudam subrotundatam, bipartitam, duodecim constituentibus plumis olivaceo-brunneis, binis exceptis extimis, quarum radii exteriores albo colore gaudent: rostro tibiisque nigris: iride albâ.

Plumage very soft and open in texture; crest, crown, and cheeks, black; the frontal feathers having a slight margin of white; back of the neck cinereous; back olive-gray; throat and breast white; abdomen pale yellow, the feathers lineated along the centre with black; vent and under tail coverts pale straw-colour; wings dark olive brown; the primaries, secondaries, and tertials, edged with dirty white; tail slightly rounded, bipartite, and composed of twelve feathers, of an olive-brown colour, excepting the two outermost, which have the outer webs white; bill and legs black; irides white.

Total length, $4\frac{2}{8}$ inches; extent of wings, $5\frac{5}{8}$ inches; wing, from the carpal joint, $2\frac{2}{10}$ inches; tail, $1\frac{9}{20}$ inch; tarsi, $\frac{7}{10}$ inch; middle toe, including the claw, $\frac{1}{2}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{4}{10}$ inch; claw, $\frac{2}{10}$ inch; bill, $\frac{3}{10}$ inch; to the corner of the mouth, $\frac{1}{2}$ inch.

Killed near Valparaiso on the 28th of May, whilst actively gleaning for insects among some low bushes; it was alone, and excepting a faint *stzee stzee*, silent. It was now and then observed to capture flies on the wing, although such was, evidently, not its regular habit.

ZOSTEROPS FLAVICEPS.—(Nob.)

PLATE XXV. FIG. 5.

Collection Exp. Exp.

Z. capitis colore flavo, ad verticem in viridem vergente: loris nigris: dorso humerisque cinereis: uropygio alisque virescenti-flavis: ventre crissoque lutescenti-albis: remigibus brunnescenti-nigris, pogoniis margine interno albis, externo flavis: caudæ subforficatæ plumis secundùm pogonia externa angustè flavo marginatis: rostro tibiisque pallidè brunnescenti-cæruleis: iride diluto-brunneâ.

Head yellow, inclining to green on the crown; lores black; back and shoulders ash-colour; rump and wings greenish-yellow; belly and under tail coverts buffy-white; quill-feathers brownish-black, the webs white on their inner edges, and yellow on their exterior edges; tail slightly forked, the feathers having a narrow edge of yellow on the outer web; bill and legs pale brownish-blue; irides light brown.

Total length, $5\frac{1}{10}$ inches; extent of wings, $7\frac{1}{2}$ inches; wing, from the carpal joint, $2\frac{6}{10}$ inches; tail, $1\frac{8}{10}$ inch; tarsi, $\frac{13}{20}$ inch; middle toe, including the claw, $\frac{6}{10}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{1}{2}$ inch; claw, $\frac{2}{10}$ inch; bill, $\frac{4}{10}$ inch; to the angle of the mouth, $\frac{11}{20}$ inch.

Our specimen was killed in a grove of Casuarina trees, at Venualevu, one of the Feejee Islands, on the 15th of June. It closely resembles *Z. dorsalis*,* specimens of which we obtained in New South Wales, but is altogether of a brighter colour, and has not the ferruginous tinge on the flanks, &c.; the most marked distinction is perhaps its yellow throat, that of *Z. dorsalis* being cinereous.

* Vigors and Horsfield's Australian Birds, Linn. Trans., vol. xv. p. 235.

AMPELIDÆ.

EOPSALTRIA FLAVIFRONS.—(Nob.)

PLATE XXVI. FIG. 1.

Vassi-vassi of the Samoans.

Collection Exp. Exp.

E. verticis, genarum, alarum, caudæque plumis fusco-plumbeis; dorsi uropygiique olivaceis; frontis ventrisque lætè cambogiacis; gutturis, albis: rostro tibiisque nigris: iride brunneâ: remigum quartâ quintâque æqualibus, longissimis; primâ mediam longitudinem secundæ attengente: tectricibus alarum inferioribus albis, flavo marginatis: caudâ rotundatâ. Mas.

Crown, cheeks, wings, and tail, dark lead-colour; back and rump olive; front and abdomen, bright gamboge-yellow: throat white; bill and legs black; irides brown; fourth and fifth quills equal and longest; first, half the length of the second; under wing coverts white, edged with yellow; tail rounded. Male.

Total length, $6\frac{3}{10}$ inches; wing, from the carpal joint, $3\frac{8}{10}$ inches; tail, $2\frac{1}{2}$ inches; tarsi, $1\frac{9}{20}$ inch; middle toe, including the claw, $\frac{6}{10}$ inch; claw, $\frac{1}{4}$ inch; hind toe, $\frac{7}{10}$ inch; claw, $\frac{1}{4}$ inch; bill, $\frac{1}{2}$ inch; to the angle of the mouth, $\frac{8}{10}$ inch.

This is quite a common bird in the bushy grounds on the Island of Upolu; it is named, from its cry, *Vassi-vassi*, which it utters in a clear full-toned whistle. Its general appearance and habits assimilate it to our yellow-breasted Chat (*Pipra polyglotta* of Wilson), but it is not so noisy, nor active. The form of the bill prevents our placing it in the genus Icteria, of Vieillot, where, by its habits, it should be, but

a closely allied species found in New South Wales, and figured by Lewin, Plate XXIII., having occasioned Mr. Swainson to form the genus Eopsaltria, we have followed his arrangement.

EOPSALTRIA ICTEROIDES.—(Nob.)

Plate XXVI. Fig. 2.

Collection Exp. Exp.

E. capite, collo, alis caudâque fusco-plumbeis: dorso uropygioque fusco-olivaceis: fronte, gutture, abdomine atque crisso lætè cambogiacis: iride brunneâ: rostro nigro: tibiis rubescenti-brunneis. Mas.

Head, neck, wings, and tail, dark lead-colour; back and rump dark olive; front, throat, abdomen, and under tail coverts, bright gamboge-yellow; irides brown; bill black; legs reddish-brown. Male.

Total length, $6\frac{7}{10}$ inches; wings, from the carpal joint, $3\frac{6}{10}$ inches; tail, $2\frac{4}{10}$ inches; tarsi, $\frac{19}{20}$ inch; middle toe, including the claw, $\frac{8}{10}$ inch; claw, $\frac{2}{10}$ inch; hind toe, $\frac{6}{10}$ inch; claw, $\frac{1}{4}$ inch; bill, $\frac{11}{20}$ inch; to the angle of the mouth, $\frac{9}{10}$ inch.

Killed at the Samoan, or Navigators' Islands, with the last. It is considered to be a distinct species by the natives.

EOPSALTRIA ALBIFRONS.—(Nob.)

Plate XXVI. Fig. 3.

Collection Exp. Exp.

E. capite, dorso, uropygio, alis, caudâ, olivaceo-brunneis: fronte gutturequeque albis: corpore crissoque cambogiaco-nitidis: rostro pedibusque nigris: iride brunneá.

Head, back, rump, wings, and tail, olive-brown; front and throat white; body and under tail coverts bright gamboge-yellow; bill and feet black; irides brown.

Total length, 6 inches; wing, from the carpal joint, $3\frac{4}{10}$ inches; tail, $2\frac{4}{10}$ inches; tarsi, $\frac{9}{10}$ inch; middle toe, including the claw, $\frac{6}{10}$ inch; claw, $\frac{2}{10}$ inch; hind toe, $\frac{3}{10}$ inch; claw, $\frac{2}{10}$ inch; bill, $\frac{6}{10}$ inch; to the angle of the mouth, $\frac{8}{10}$ inch.

Killed at the Samoan Islands, where they frequent bushy grounds, like the Vassi-vassi, but it is not so common. All three of the last described birds are closely allied, if not specifically the same; but as they are all considered to be different species by the natives, who generally have a very correct knowledge of the products of their islands; and as they all differ in plumage, although killed in the same season (October and November), we have thought it proper to present them to our readers as we found them; expressing at the same time our suspicions of their identity.

MUSCICAPIDÆ.

RHIPIDURA FLABELLIFERA.—(Lath.)

Fan-tailed Flycatcher. *Muscicapa flabellifera.* Lath., Gen. History of Birds, vol. vi. p. 184, pl. 99.
Rhipidura flabellifera. Horsf. et Vigors, Linn. Trans., vol. xv. p. 247.
Hee-waka-waka of the New Zealanders.

This beautiful and familiar bird was quite common in all the forest districts around the Bay of Islands, New Zealand. Whenever we entered a bushy and retired situation, we were sure to be attacked by numerous mosquitoes, and whenever so attacked, were sure to hear the "Hee-waka-waka," as this bird is there called from its cry; it was almost certain to come to our relief, darting after the mosquitoes within a few inches of our faces, then alighting on low branches, and skipping round; their wings drooping, and their beautiful fan-like tails carried nearly perpendicular over their backs. There is scarcely any difference in the plumage of the two sexes; both have it equally soft and lax: so much so, that it is exceedingly difficult to skin them in such a manner as to make good specimens.

RHIPIDURA NEBULOSA.—(Nob.)

Plate XXVII. Fig. 1.

Collection Exp. Exp.

R. fuliginoso-nigra; crisso, rectricum rhachibus apicibusque albis: tegminibus alarum majoribus apice brunneis: gutture albido: mandibulâ inferiori ad basin albâ: tibiis nigris: iride brunneâ.

Fuliginous black; under tail coverts, shafts of the tail-feathers, and their tips, white; greater wing coverts tipped with brown; throat whitish; lower mandible white at the base; legs black; irides brown.

Total length, $5\frac{1}{2}$ inches; extent of wings, $8\frac{1}{4}$ inches; wing, from the carpal joint, $3\frac{1}{10}$ inches; tail, $3\frac{1}{10}$ inches; tarsi, $\frac{7}{10}$ inch; middle toe, including the nail, $\frac{5}{10}$ inch; nail, $\frac{3}{10}$ inch; hind toe, $\frac{9}{20}$ inch; nail, $\frac{2}{10}$ inch; bill, $\frac{3}{10}$ inch; to the angle of the mouth, $\frac{6}{10}$ inch.

They were found in the month of October, inhabiting shady forests on the island of Upolu; and were not so familiar or noisy as the New Zealand Fan-tails.

MONARCHA NIGRA.—(Lath.)

Society Flycatcher. *Muscicapa nigra.* Latham, Gen. Hist. of Birds, vol. vi. p. 185.
Luteous Flycatcher. *Muscicapa lutea.* Lath., Gen. Hist. of Birds, vol. vi. p. 208, No. 86.
Muscicapa Pomarea. Lesson.
Gobe-mouche de Maupiti. Muscicapa Maupitiensis. Garnot. Voyage de la Coquille, Zool. tom. i. pt. 2, p. 592, pl. 17.

Collection Exp. Exp.

This is a very common species on the Island of Tahiti. It is not surprising that already it should have so many names: the four we have quoted are not all, but they are sufficient to indicate the great variety of plumage in which it is disguised; black, brown, and white, are the prevailing colours of its plumage; but excepting those which are entirely black, we have not seen two specimens out of twenty or thirty, which were entirely alike. Deep black, with a metallic blue gloss, is probably the perfect dress of adult birds; it is common to find them variously spotted, black, brown, and white, without regularity, although they may be paired and raising their broods; besides the strength of their voices, for they are inclined to be musical, which indicates maturity. Hence we infer that they are subject to almost

the same variations which are so remarkable in the Nightingale of those islands :* a variation which we have never before observed birds to be subject to, in their natural state, but which is common to those which have been domesticated.

MONARCHA CINEREUS.—(Nob.)

PLATE XXVII. FIG. 2.

Collection Exp. Exp.

M. capite, dorso et alis, cinereis, subtùs pallidioribus: superciliis, palpebris, gutture ventrisque medio, albis: caudâ rotundatâ, duodecim constante plumis; omnibus, intermediis binis exceptis, apice albis, qui color, ex intermediis extrorsùm, gradatim dilatatur: rostro tibiisque pallidè cæruleis.

Head, back, and wings, cinereous; beneath lighter; brow, eyelids, throat, and middle of the abdomen, white; tail rounded, consisting of twelve black feathers, all but the two in the middle tipped with white, the white tips increasing in size from the middle outwards; irides blue-black; bill and legs pale blue.

Total length, $4\frac{7}{8}$ inches; extent of wings, $7\frac{3}{8}$ inches; wings, from the carpal joint, $2\frac{7}{10}$ inches; bill, $\frac{4}{10}$ inch; to the angle of the mouth, $\frac{6}{10}$ inch; tarsi, $\frac{7}{10}$ inch; middle toe, including the claw, $\frac{1}{2}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{9}{20}$ inch; nail, $\frac{2}{10}$ inch. Female.

The specimen from which our description and drawing have been made, was killed on the 30th of May, near Bahr, on the Island of Viti-levu, one of the Feejee Group. Its general appearance and manners reminded us of the Blue-gray Flycatcher of North America, (*Culicivora cærulea.*)

* Thryothorus Otatare, see page 88.

PLATYRHYNCHUS VANIKORENSIS.—(Quoy and Gaimard.)

Platyrhynchus Vanikorensis. Quoy et Gaimard, Voyage de l'Astrolabe, Zool. tom. i. p. 183, pl. 5, fig. 1.
Kink-ki of the Feejees.

Collection Exp. Exp.

We obtained specimens of this species on several of the Feejee Islands. They vary from those of Vanikoro in being a trifle larger, and in being more slender in form. The back of the female is cinereous, the wings and tail brown, the breast rufous, and the throat white; in other respects it is like the male.

PLATYRHYNCHUS ALBIVENTRIS.—(Nob.)

Plate XXVII. Fig. 3.

Collection Exp. Exp.

P. formâ graciliori quam P. Vanikorensis, rostro longiori: partibus omnibus subjacentibus ex pectore deorsùm albis: capite colloque nigris: dorso, tegminibus alarum minoribus atque uropygio, fusco-cinereis: alis cum caudâ nigris: ex remigibus quartâ longissimâ, et duplo ampliusque longiore quàm secunda: tectricibus alarum inferiùs jacentibus albo marginatis: gutture pectoreque nitidè rufescentibus: rostro subcœruleo: tibiis nigris: iride brunneâ.

Form more slender than P. Vanikorensis; bill longer; all the lower parts from the breast down, white; head and neck black; back, lesser wing coverts, and rump, dark ash-colour; wings and tail black; first quill less than half the length of the fourth; fourth quill longest; under coverts of the wings margined with white; throat and breast bright rufous; bill light blue; legs black; irides brown.

Total length, $5\frac{7}{8}$ inches; extent of wings, $8\frac{5}{8}$ inches; wings, from the carpal joint, $2\frac{9}{10}$ inches; tail, $2\frac{4}{10}$ inches; tarsi, $\frac{13}{20}$ inch; middle toe, including the nail, $\frac{11}{20}$ inch; nail, $\frac{3}{20}$ inch; hind toe, $\frac{9}{20}$ inch; nail, $\frac{2}{10}$ inch; bill, $\frac{1}{2}$ inch; to the corners of the mouth, $\frac{7}{10}$ inch; width, $\frac{3}{10}$ inch.

The two sexes vary but little, if at all, in size; the female has the head dark gray instead of black; also the rufous on the throat and breast is not so bright.

They are not uncommon at the Samoan Islands, delight in thick shady forests, and patiently watch for insects, which they take on the wing.

LEPTURUS BREVICAUDA.—(Nob.)

PLATE XXVII. FIG. 4.

Collection Exp. Exp.

L. capite dorsoque cinerascenti-olivaceis: plumis summi capitis ad basin lætè flavis: uropygio ferrugineo: gutture cum lineâ superciliari, albis: abdomine crissoque pallidè luteolis: alis brunneis, tertiariis tectricibusque majoribus apice albis, qui color fascias binas efficit; tectricibus inferioribus albis: caudæ brunnescenti-nigræ plumis ad basin apicemque ferrugineis; perbrevibus: tibiis longis, tenuibus, pallidè brunneis, quibus desunt plumæ aliquantulùm supra calcem: rostro tenui, nigro: iride brunneâ.

Head and back cinereous olive colour; feathers of the crown bright yellow at their base; rump ferruginous; throat and superciliary line white; abdomen and under tail coverts pale buff; wings brown; the tertials and greater coverts tipped with white, forming two bars; under coverts white; tail very short, brownish-black; the feathers ferruginous at the roots and tips; legs long, slender, pale brown, and bare of feathers some distance above the heels; bill slender, black; irides brown.

Total length, $4\frac{6}{10}$ inches; wing, from the carpal joint, $2\frac{8}{10}$ inches; tail, $1\frac{4}{10}$ inch; tarsi, 1 inch; bare space on the tibia, $\frac{7}{20}$ inch; middle toe, including the claw, $\frac{8}{10}$ inch; claw, $\frac{1}{4}$ inch; hind toe, $\frac{1}{2}$ inch; nail, $\frac{3}{10}$ inch; bill, $\frac{4}{10}$ inch; to the angle of the mouth, $\frac{7}{10}$ inch.

A single specimen was obtained near Callao, Peru, in the month of July; it was found in low bushy grounds.

CONIROSTRES.

CORVIDÆ.

CORVUS CORAX.—(L.)

Raven. *Corvus corax.* Latham, Gen. Hist. of Birds, vol. iii. p. 4.
Raven. *Corvus corax.* Wilson, Am. Orn., vol. ix. p. 136.
Raven. *Corvus corax.* Audubon, Birds of Amer., vol. iv. p. 78.
Collection Exp. Exp.

Ravens are numerous on the West Coast of America, both in winter and summer; they were observed on the whole route of the Expedition, from the Columbia River to the Bay of San Francisco, in California.

CORVUS AMERICANUS.—(Audubon.)

Corvus Americanus. Audubon, Birds of Amer., vol. iv. p. 87, pl. 225.

The same species of Crow which is so common along the whole East Coast of North America, was also observed to inhabit the West Coast, but not in such great numbers.

CORVUS OSSIFRAGUS.—(Wilson.)

Fish-Crow. *Corvus ossifragus.* Wilson, Am. Orn., vol. v. p. 27.
Fish-Crow. *Corvus ossifragus.* Audubon, Birds of America, vol. iv. p. 94.

Observed by the Expedition on the Columbia River, Oregon; and on the Bay of San Francisco in California.

CORVUS LEPTONYX—(Nob.)

Plate XXIX.

Collection Exp. Exp.

C. capite, collo, pectore ventreque spadiceis; gutturis plumis elongatis acuminatisque: alarum caudæque plumis nigris purpureo-irescentibus: totius corporis plumis magnoperè iridescentibus: digitorum exteriorum unguibus notabiliter brevibus: alis caudæ longitudinem æquantibus, superantibusve; remigibus acutè acuminatis: caudâ rotundatâ: iride brunneâ: rostro pedibusque nigris. Femina.

Head, neck, breast, and abdomen, snuff-coloured brown; the feathers of the neck elongated and pointed; wings and tail black, with purple reflections; the whole of the plumage highly glossed; claws on the outer toes remarkably short; wings, when closed, projecting beyond the tail, acutely pointed; tail rounded like C. corax; irides brown; bill and feet black. Female.

Total length, 20 inches; extent of wings, 44 inches; wings, from the carpal joint, $15\frac{6}{10}$ inches; tail, $8\frac{1}{10}$ inches; tarsi, $2\frac{9}{20}$ inches; middle toe, including the claw, $1\frac{9}{10}$ inch; claw, $\frac{11}{20}$ inch; hind toe, $1\frac{6}{10}$ inch; claw, $\frac{3}{4}$ inch; bill, $2\frac{1}{10}$ inches; to the corner of the mouth, $2\frac{4}{10}$ inches.

The form and general aspect of this bird is more that of the Raven than of the Crow; the bill is arched like that of the Raven, and the tail is of the same form, but the acutely pointed quills, and short nails, particularly those on the outer toes, present a marked character, which separates it from any other which we have had an opportunity to examine.

The specimen from which our description is taken, was shot within a short distance of the City of Funchal, on the Island of Madeira, in the month of September. They were not uncommon, but we were not so fortunate as to obtain a male, not suspecting at the time, that it was an undescribed species.

CORVUS HAWAIIENSIS.—(Nob.)

Plate XXVIII.

Alala of the Hawaiians.

C. formâ similis C. coraci; colore vix non penitùs fuliginoso-brunneo, remigibus nonnihil pallidioribus: corporis totius plumis ad basin plumbeis: rostro, tibiis unguibusque cærulescenti-nigris: iride brunneâ: plumulis setaceis nares contegentibus nigris irescentibusque: remigum tribus primis gradatis, quartâ longissimâ; scapis suprà nigris, subtùs albis: caudâ rotundatâ, ex duodecim conflatâ plumis; scapis supernè nigris, subtùs fuliginosis.

In form like the Raven; colour nearly uniform, sooty brown; the quills somewhat lighter; all the feathers of the body lead-coloured at the roots; bill, legs, and claws, blue-black; irides brown; setaceous feathers, covering the nostrils, black and glossy; three first quills graduated, fourth longer; shafts black above, white beneath; tail rounded, consisting of twelve feathers; shaft black above, sooty beneath.

One specimen measures $18\frac{7}{8}$ inches total length; bill, $2\frac{3}{10}$ inches; tarsus, $2\frac{1}{2}$ inches; hind claw, $\frac{8}{10}$ inch. Male?

A second: total length, $17\frac{1}{4}$ inches; bill, 2 inches; tarsus, $2\frac{2}{10}$ inches. Female?

Like most of its congeners, this species is noisy; its voice closely resembles that of the North American Fish-crow, *C. ossifragus*. It was observed in small societies on the Island of Hawaii, where it is known to the natives by the name of Alala. They frequent the woody districts of the interior, seldom, if ever, visiting the coast. We noticed that the smaller species of birds were kept in great terror by the presence of the Alala: from this we infer that, like other crows, they will rob nests of their eggs, and when an opportunity offers, eat the old birds also: such was their character as given to us by the natives.

The specimens were obtained a few miles inland from the village Kaawaloa, celebrated as being the spot where the renowned Captain Cook was killed:—a camera lucida sketch is introduced on our plate, as a background to the bird. Our specimens, collected by the Expedition, of the Hawaiian Crow, or Alala, with many important notes attached, were lost in the wreck of the U. S. Ship Peacock; but we are happy to acknowledge our obligations to Mr. J. K. Townsend, who has kindly loaned us others, collected at the same place, and sent to him by the Rev. Mr. Forbes, missionary at Karakakoa Bay.

PICA NUTTALLII.—(Audubon.)

Yellow-billed Magpie. *Pica Nuttallii*. Audubon, Birds of America, vol. iv. p. 104, pl. 228.

This species was first observed about the forty-second degree of north latitude, on the south side of the Shasty Mountains, or the boundary between Oregon and California, and from thence south continued common on the route of the Expedition down the Sacramento River. It frequents the oak groves which now and then diversify the prairie lands of that country; and at the season we passed, in the month of September, it was the only species of Magpie seen; but it is probable that the common Magpie,* which is known to breed in the Rocky Mountains, but a short distance farther east, may take its place in the lower lands during the winter season, when the Yellow-billed is said to remove further south.

* Pica Melanoleuca, Vieill. Audubon, Birds of America, vol. iv. p. 99.

GARRULUS STELLERI.—(Gm.)

Collection Exp. Exp.

This beautiful Jay was seen almost daily by the members of the Expedition, while in Oregon, where it is an abundant species. Their principal food in the latter part of the summer, appeared to be hazel-nuts, which they pierced with their powerful bills, by placing the nuts in a hole made in the bark of the trees; but whether the holes were previously made for the same purpose by Woodpeckers, or that the Jays were their own carpenters, we could not determine. We saw no more of them after passing the forty-second degree of latitude.

GARRULUS ULTRAMARINUS.—(Bonaparte.)

Ultramarine Jay. *Garrulus ultramarinus.* Audubon, Birds of Am., vol. iv. p. 115.

Collection Exp. Exp.

This species was seen on the Columbia River, and was found common in all the country south, to California. It is most partial to mountainous districts.

STURNIDÆ.

LAMPROTORNIS ATRIFUSCA.—(Nob.)

PLATE XXX. FIG. 1.

Collection Exp. Exp.

L. capite colloque saturatè purpureis, atrisve, metallicè nitentibus: alis, caudâ corporeque umbrinis, hoc anticè saturatissimè, in fuscum colli colorem vergente; primariis margine exteriori ferruginoso-brunneis: caudâ rotundatâ, plumis acuminatis: rostro valido, nigro: tibiis rubido-brunneis: iride concolore.

Head and neck dark purple or black, with metallic reflections; wings, tail, and body umber-brown, darkest in front, and running into the dark colour of the neck; outer margins of the primaries ferruginous brown; tail rounded, the feathers pointed; bill strong, black; legs reddish-brown; irides reddish-brown.

Total length, $10\frac{3}{4}$ inches; extent of wings, $17\frac{1}{2}$ inches; wings, from the carpal joint, $6\frac{1}{10}$ inches; tail, $4\frac{1}{10}$ inches; tarsi, $1\frac{1}{4}$ inch; middle toe, including the claw, $1\frac{1}{2}$ inch; claw, $\frac{9}{20}$ inch; hind toe, $1\frac{3}{20}$ inch; claw, $\frac{1}{2}$ inch; bill, $1\frac{1}{10}$ inch; to the angle of the mouth, $1\frac{3}{10}$ inch.

It inhabits the Samoan Islands, is very active and noisy, its notes being scarcely entitled to the name of song. The female is somewhat less than the male in size, and has less metallic lustre on the head and neck, but in other respects is precisely similar.

LAMPROTORNIS? FUSCA.—(Nob.)

PLATE XXX. FIG. 2.

Collection Exp. Exp.

L. verticis, auricularibus, dorsi caudæque plumis sepiaco-brunneis; capitis autem saturatissimis, acuminatis, metallicè purpureo irescentibus: primariis umbrinis; secundariis pallidioribus, albo marginatis: gutture, tectricibus inferioribus caudæ alarumque, flavescentibus: pectore ventreque atrofuscis; plumarum rhachibus, albis; medio lineâ pallente longitudinaliter notatis: iride aurantiâ: rostro tibiisque fuscescenti-rubris.

Crown, auriculars, back, and tail, sepia-brown; darkest on the head, where the feathers are pointed, and have a purple metallic lustre; primary quills umber; secondaries paler, and margined with white; throat, under tail, and under wing coverts pale tawny; breast and abdomen "drab," the feathers having white shafts, and a pale line down the centre; irides orange; bill and feet dusky red.

Total length, $7\frac{1}{2}$ inches; wing, from the carpal joint, $4\frac{3}{10}$ inches; tail, $2\frac{1}{2}$ inches; tarsi, $1\frac{1}{20}$ inch; middle toe, including the claw, 1 inch; claw, $\frac{3}{10}$ inch; hind toe, $\frac{8}{10}$ inch; claw, $\frac{3}{10}$ inch; bill, $\frac{7}{10}$ inch; to the angle of the mouth, 1 inch.

The females have less metallic lustre on the feathers of the head and neck, but otherwise cannot be distinguished from the males.

This bird is not uncommon at the Tonga and Feejee Islands; its habits are much like those of a thrush; is quite musical, singing sweetly in the bread-fruit trees, and other places in the vicinity of cultivated grounds.

At the Feejee Islands we obtained a specimen which is much larger and darker in its colour, although it is apparently the same species.

LAMPROTORNIS BREVIROSTRIS.—(Nob.)

PLATE XXX. FIG. 3.

Collection Exp. Exp.

L. capite ferè nigro, plumis elongatis, metallicè splendentibus: dorso caudâque pallidè umbrinis: alis obscurioribus; secundariis albo colore marginatis, speculum efficiente: subtùs fulvescens, pectore saturatissimo, plumis lineâ medianâ pallidiori vix conspiciendâ notatis: rostro pedibusque rubescenti-corneis: iride aurantio-nitidâ.

Head nearly black, the feathers elongate, and having a metallic lustre; back and tail pale umber; wings darker; secondaries edged with white, forming a "speculum;" beneath pale tawny, darkest on the breast, the feathers with a lighter, but obscure, central line; bill and feet reddish horn-colour; irides bright orange.

Total length, $7\frac{1}{8}$ inches; extent of wings, $12\frac{1}{2}$ inches; wings, from the carpal joint, $4\frac{2}{10}$ inches; tail, $2\frac{3}{20}$ inches; tarsi, $\frac{19}{20}$ inch; middle toe, including the claw, $\frac{9}{10}$ inch; claw, $\frac{3}{10}$ inch; hind toe, $\frac{8}{10}$ inch; claw, $\frac{3}{10}$ inch; bill, $\frac{1}{2}$ inch; to the angle of the mouth, $\frac{17}{20}$ inch.

This bird was obtained at the Samoan Islands, where it is not common; it bears a strong resemblance to the foregoing species, and like it, is musical.

AGELAIUS GUBERNATOR.—(Wagler.)

Crimson-winged Tropical, or Red-and-black-shouldered Marsh Blackbird. Audubon, Birds of America, vol. iv. p. 29, pl. 215.

Collection Exp. Exp.

About the middle of July, when the U. S. Ship Peacock was lost at the mouth of the Columbia River, this species, and the common

Swamp Blackbird of the Eastern Coast of America,* were found congregating in small parties, previous to their departure south; it was of course too late to find their nests, or learn much of their habits; but we have every reason to believe, as both species were found in the same meadow-land, and in the same flocks, that they are closely allied. Subsequently, we saw them when on our route, by land, to California, in the month of October; then they were in very large flocks of both species together, and accompanied by a few Rusty Grackles.†

AGELAIUS BREWERII.—(Aud.)

Brewer's Blackbird. *Quiscalus Brewerii.* Audubon, Birds of America, vol. vii. p. 345, pl. 492.

Collection Exp. Exp.

Specimens of this bird were obtained at Puget Sound, in Oregon, during the spring and early summer months; they were in perfect and brilliant plumage. In the month of October, they were again seen near the Mission of St. Joseph, in California, in vast flocks; the greater part had then rusty-looking plumage, and were very like the Rusty Grackles of the Eastern Coast, from which it was scarcely possible to distinguish them.

LEÏSTES NIGER.—(Swainson.)

Leïstes niger. Swainson. Lardner, Cabinet Cyclopædia. Two centenaries and a quarter new or hitherto imperfectly described. No. 74, p. 304.

Collection Exp. Exp.

This species was seen in vast flocks, from which half a dozen or more were killed at a shot, at Orange Bay, Tierra del Fuego, in the

* *Agelaius phœniceus*, L. Audubon, Birds of America, vol. iv. p. 31, pl. 216.
† *Quiscalus ferrugineus*, Lath. Audubon, Birds of America, vol. iv. p. 65, pl. 222.

month of February. The sexes could not be distinguished except by dissection, both being of the same uniform black colour; they were then moulting, and filled with "pin" feathers; the plumage was consequently not so glossy, nor firm, as on specimens killed near Valparaiso, in Chili, three months afterwards, although we have no doubt of their identity.

The irides of this species being dark brown, gives the bird a different appearance from the Grackles of North America, which generally have yellow irides; they are most frequently seen on the ground.

STURNELLA MILITARIS.—(Gm.)

Magellanic Stare. *Sturnus militaris.* Latham, Gen. Hist. of Birds, vol. v. p. 8.

Sturnella militaris. Vieill. Darwin, Zoology of the Voyage of H. M. S. Beagle, part 3, Birds, by J. Gould, Esq., F. L. S., p. 110.

Collection Exp. Exp.

This is the analogue of the Meadow Lark of North America;* its manners, voice, and markings of the plumage, bear a general resemblance to it, the colours making the principal difference: the red of the Southern bird being on those parts which are yellow in the Northern. They are found from the southern parts of Brazil to the Straits of Magellan, on the East Coast; and on the West, the furthest north we observed them, was in Chili; we surmise, however, that on a careful comparison of specimens, two species will be found, where but one now is supposed to exist. All the specimens which we obtained on the East Coast, from the south of Brazil, and at the Rio Negro, in Patagonia, are smaller, have a more slender bill, and the tail more distinctly banded, than those obtained in Chili; the difference is about as great between those inhabiting the East and West Coasts of South America, as that which has been shown in their analogues, the Meadow Larks of North America, which inhabit the eastern and western shores of our continent.

* Meadow Lark. *Alauda magna.* Wilson, Amer. Ornith., vol. iii. p. 20. *Sturnella Ludovicanæ.* Audubon, Birds of America, vol. iv. p. 70, pl. 223.

STURNELLA NEGLECTA.—(Aud.)

Missouri Meadow Lark. *Sturnella neglecta.* Audubon, Birds of America, vol. vii. p. 339, pl. 489.

Collection Exp. Exp.

The Larks which are quite common in all favourable localities throughout Oregon, but particularly about the Columbia and Willamette Rivers, agree with Mr. Audubon's description of this species; the diminutive size, and the form of the tail, it appears by our specimens, are constant characters; but the colours and marks vary from summer to winter, in the same manner with the western Larks, as they do in those of the Eastern Coast, and consequently present but indifferent characters for comparison of specimens, unless the seasons when they are killed should be carefully registered. Mr. Audubon remarks, "The general colours and markings are much the same in both species, but paler in the present one." In ours, the black marks, on the breast particularly, are deeper and more decided.

The common Meadow Lark of the East Coast of America, *Sturnella Ludovicanæ*, Lin., of the same author, was not seen by the members of the Expedition in Oregon or California.

FRINGILLIDÆ.

GEOSPIZA PERUVIENSIS.—(Nob.)

PLATE XXXI. FIGS. 1, 2.

Collection Exp. Exp.

G. mas: omninò niger, chalybeo-iridescens: in juvenibus, apice margineque plumarum dorsi et capitis brunneis, pectoris albidis.

Male entirely black, with steel-blue reflections; immature birds have the tips and edges of the feathers brown on the back and head, and whitish on the breast.

Total length, $4\frac{4}{10}$ inches; wing, from the carpal joint, $2\frac{2}{10}$ inches; tail, $1\frac{7}{10}$ inch; tarsi, $\frac{6}{10}$ inch; middle toe, $\frac{9}{20}$ inch (nail broken); hind toe, including the nail, $\frac{1}{2}$ inch; nail, $\frac{2}{10}$ inch.

G. femina: supernè umbrina, subtùs pallidior: plumis pectoris hypochondriorumque lineâ longitudinali brunneâ notatis.

Female: umber brown above, lighter beneath; feathers of the breast and flanks with darker longitudinal line.

Total length, $4\frac{1}{10}$ inches: wing, from the carpal joint, $2\frac{3}{20}$ inches; tail, $1\frac{1}{2}$ inch; tarsi, $\frac{6}{10}$ inch; middle toe, including the nail, $\frac{11}{20}$ inch; nail, $\frac{2}{10}$ inch; hind toe, $\frac{9}{20}$ inch; nail, $\frac{2}{10}$ inch.

Found in the month of July, in bushy and rather sterile districts, which lie between Callao and Lima, in Peru.

GEOSPIZA PRASINA.—(Nob.)

PLATE XXXI. FIG. 3.

Collection Exp. Exp.

G. vertice, auricularibus, tectricibusque caudalibus supernis coccinei coloris: collo postico, cum corpore, prasino; subtùs pallidiore: pectoris superficie cærulescente, in indigoticum, versùs guttur nigrum, caligante; remigibus rectricibusque nigris, viridi marginatis: rostro tibiisque nigris: iride brunneâ.

Crown, auriculars, and upper tail coverts scarlet; back of the neck and body, bright green; lightest beneath; breast light blue on the surface, running into a deep indigo-blue towards the throat, which is black; quill and tail feathers black, margined with green; bill and legs black; irides brown.

Total length, $4\frac{1}{4}$ inches; extent of the wings, $7\frac{3}{8}$ inches; wings, from the carpal joint, $2\frac{4}{10}$ inches; tail, $1\frac{1}{4}$ inch; tarsi, $\frac{6}{10}$ inch; middle toe, including the claw, $\frac{6}{10}$ inch; claw, $\frac{2}{10}$ inch; hind toe, including the claw, $\frac{1}{2}$ inch; claw, $\frac{1}{4}$ inch; bill, $\frac{4}{10}$ inch in length; depth at the base, $\frac{3}{10}$ inch.

Found in scattered flocks about Casuarina trees, in an open dry country, on the island of Venua Levu, one of the Feejees; they were frequently on the ground, but what they were feeding on we were unable to determine. Their common note is shrill and harsh, but, occasionally, one was heard to warble very sweetly.

GEOSPIZA CYANEOVIRENS.—(Nob.)

PLATE XXXI. FIG. 4.

Collection Exp. Exp.

G. capite carmesino: collo, gutture pectoreque cærulescente-nigris: alis, ventre atque crisso, viridibus, azureo-irescentibus: remigibus secundariisque atris, margine externo viridibus: caudâ rotundatâ, brunnescenti-nigrâ, rubido-brunneo marginatâ, intermediis binis brunnescenti-rubris: rostro tibiisque nigris: iride brunneâ.

Head crimson; neck, throat, and breast, light blue; back, wings, belly, and under tail coverts green, with light blue reflections; quills and secondaries black, with green outer margins; tail rounded, brownish-black, margined with reddish-brown; the two centre feathers brownish-red; bill and legs black; irides brown.

Total length, $4\frac{6}{10}$ inches: wing, from the carpal joint, $2\frac{1}{2}$ inches; tail, $1\frac{4}{10}$ inch; tarsi, $\frac{7}{10}$ inch; middle toe, including the claw, $\frac{7}{10}$ inch; claw, $\frac{1}{4}$ inch; hind toe, $\frac{6}{10}$ inch; claw, $\frac{1}{4}$ inch; bill, $\frac{1}{2}$ inch.

Specimens of this species were obtained at the Island of Upolu, one of the Samoan Group; they are, however, very rare, owing, in all probability, to their favourite haunts being quite limited in extent. They delight in open, or bushy grounds, and are seldom found amongst large trees.

CAMARHYNCHUS LEUCOPTERUS.—(Nob.)

PLATE XXXII. FIG. 1.

Collection Exp. Exp.

C. mas: vertice, dorso uropygioque brunneis; plumis dorsi in medio saturatioribus: alis caudâque fusco-brunneis nigrisve: rectricum apice margineque, secundariis tegminibusque alarum minoribus, brunnescentibus: fasciâ albâ alam ad basin remigum intersecante, pennasque omnes, ex primariis tribus primis exceptis, connotante: gutture, pectore, abdomine, fulvescentibus: iride brunneâ: tibiis fuliginosis: rostro flavescenti-carneo.

Male: crown, back, and rump, brown; feathers of the back darker-coloured in the middle; wings and tail dark brown or black; the tips and margins of the tail-feathers, secondaries, and lesser wing-coverts, light brown; a white bar crosses the wings at the base of the quills, including all except the three first primaries; throat, breast, and belly, light tawny; irides brown; legs sooty; bill yellowish flesh-colour.

Total length, 4 inches; extent of wings, $6\frac{7}{8}$ inches; from the carpal joint, $2\frac{2}{10}$ inches; tail, $1\frac{1}{2}$ inch; tarsi, $\frac{6}{10}$ inch; middle toe, including the claw, $\frac{1}{2}$ inch; claw, $\frac{2}{10}$ inch; hind toe, $\frac{9}{20}$ inch; claw, $\frac{1}{4}$ inch; bill, $\frac{7}{20}$ inch.

C. femina: supernè pallidiùs uniformiùsque brunnea: colore caudæ alarumque fuliginosiori, minùs atro, fasciâ albâ minùs conspicuâ: dimensionibus minor.

Female: lighter-coloured, and more uniformly brown above; tail and wings more fuliginous, and not so black, and having a less conspicuous white bar; in size, rather less than the male.

They were killed near Callao, Peru, in the early part of the month of July, while feeding on the seeds of a species of grass. The males have a very sweet warbling note.

FRINGILLA ITALIÆ.—(Vieill.)

La Fringille à tête Marron. Fringilla Italiæ. Vieill. Gal. des Oiseaux, vol. i. p. 76, pl. 63.

Collection Exp. Exp.

This species was found breeding on the Island of St. Jago, Cape de Verds, on the 6th of October. They build a covered nest in the form of an oven, in thorny Acacias, from five to ten feet above the ground. Their song is lively and sweet.

FRINGILLA AUSTRALIS.—(Lath.)

Rusty-collared Finch. *Fringilla Australis.* Lath. Gen. Hist. of Birds, vol. vi. p. 128, No. 111.
Morton's Finch. *Fringilla Mortonii.* Audubon, Birds of America, vol. iii. p. 151, pl. 190.
Zonotrichia canicapilla. Gould. Zool. of the Beagle, pt. 3, p. 91.

Collection Exp. Exp.

We observed this species first at Orange Bay, Tierra del Fuego; subsequently in Chili, near Valparaiso, and also near Callao, in Peru; but did not see it in California. The two longitudinal black bands from the bill to the occiput are, in some specimens, very obscure.

FRINGILLA SAVANNA.—(Wils.)

Savannah Finch. *Fringilla Savanna.* Wilson, Am. Orn., vol. iv. p. 72.
Savannah Bunting. *Emberiza Savanna.* Audubon, Birds of America, vol. iii. p. 68, pl. 160.

Collection Exp. Exp.

Common throughout the route of the Expedition in Oregon and California.

FRINGILLA SOCIALIS.—(Wils.)

Chipping Sparrow. *Fringilla socialis.* Wilson. Am. Orn., vol. ii. p. 127.
Chipping Bunting. *Emberiza socialis.* Audubon, Birds of America, vol. iii. p. 8, pl. 165.

Collection Exp. Exp.

This species was observed in Oregon, but is not common. Being a social bird, and inclined to linger about the habitations of man, to meet with it in a portion of our continent so recently settled, was quite unexpected.

FRINGILLA (NIPHÆA) LACINIATA.—(Nob.)

Plate XXXII. Fig. 2.

Collection Exp. Exp.

F. capite, collo, pectore, dorso alisque cinereis: scapularibus brunneis, margine fulvescenti: plumis dorsalibus apice fulvescenti, medio brunneis: abdomine crissoque pallidè eburneis: alis cinereis; primariis pallidè sepiacis, subtùs pallidioribus, margine externo cinereis: caudâ æquatâ, duodecim constante plumis nigris, in medio fasciâ albâ intersectis, quæ tamen intermedias binas plumas non notat, nec radios ullius externos, extimis binis exceptis: rostro tibiisque flavis: iride brunneâ. Mas.

Head, neck, breast, back, and wings, cinereous; scapulars brown, with fulvous margins; dorsal plumage tipped with fulvous, and having a brown centre; abdomen and under tail coverts pale cream-colour; wings cinereous; primaries pale sepia-brown, lighter beneath; the exterior margins cinereous: tail even, consisting of twelve feathers; black, with a white band across the middle, which does not include the two middle feathers, or the outer webs of any but the two outside; bill and legs yellow; irides brown. Male.

Total length, $5\frac{9}{10}$ inches; wing, from the carpal joint, $3\frac{6}{10}$ inches; tail, $2\frac{3}{10}$ inches; tarsi, $\frac{8}{10}$ inch; middle toe, including the claw, $\frac{6}{10}$ inch; claw, $\frac{2}{10}$ inch; hind toe, $\frac{11}{20}$ inch; claw, $\frac{3}{10}$ inch; bill, $\frac{1}{2}$ inch; to the angle of the mouth, $\frac{6}{10}$ inch.

Obtained in the vicinity of Valparaiso, Chili, in the month of May, at which season they are not common. It frequents low bushes, and is much on the ground. In general habits and appearance it resembles the Snowbird of North America (*Niphæa hyemalis*); the tail, however, appears bordered with black, while the birds are flying, instead of having the white margin of the northern species.

ERYTHROSPIZA FRONTALIS.—(Say.)

Fringilla frontalis. Say. Long's Exped., vol. ii. p. 40.
Crimson-necked Bullfinch. *Pyrrhula frontalis.* Bonaparte, Am. Orn., vol. i. pl. 1.
Erythrospiza frontalis. Audubon, Birds of America, vol. iii. p. 175, pl. 192.

Collection Exp. Exp.

Observed in various parts on the West Coast of North America, from Puget's Sound to California.

LOXIA CURVIROSTRA.—(L.)

American Crossbill. *Curvirostra Americana.* Wilson, Am. Orn., vol. iv. p. 44.
Common Crossbill. *Loxia curvirostra.* Audubon, Birds of America, vol. iii. p. 186, pl. 200.

Collection Exp. Exp.

Common in Oregon, from the Rocky Mountains to the Coast.

PIPILO ARCTICUS.—(Sw.)

Pyrgita (Pipilo) arctica. Swainson. Fauna Bor. Am., vol. ii. p. 260.
Arctic Groundfinch. *Pipilo arcticus.* Audubon, Birds of America, vol. iii. p. 194, pl. 164.

Collection Exp. Exp.

This is a common bird in all favourable ground throughout Oregon; it there occupies the same position which the "Towhe," or

"Jewinck," (*P. erythrophthalma,*) does on the eastern side of the Rocky Mountains.

PIPILO CINEREA.—(Nob.)

PLATE XXXII. FIG. 3.

Collection Exp. Exp.

P. cineraceo-grisea: gutture maculâque ventris albis: calcibus atque ano ferrugineis: crisso albo, marginibus ferruginosis: caudam duodecim constituentibus plumis, modicè rotundatam, scapis nigris, intermediis quatuor plumis obscuro-cinerascenti-brunneis, reliquis, prope apicem, secundùm radios internos, albis; qui color albus dimidiam partem lateralium connotat, in reliquis autem gradatim minuitur in guttulam, quæ in quartâ apparet: mandibulâ superiori brunneâ; inferiori cærulescenti-albâ: tibiis saturatè brunneis: iride brunneâ.

Cinereous gray; throat and abdominal spot white; heels and vent ferruginous; under tail coverts white, edged with ferruginous: tail consisting of twelve feathers, slightly rounded; shafts black, the four middle feathers dark ashy brown, the others with white inner webs near their tips; the white occupies about half of the outer feathers, and is graduated on the others to a mere spot on the fourth; upper mandible brown; lower mandible bluish-white; legs dark brown; iris brown.

Total length, $7\frac{3}{4}$ inches; wings, from the carpal joint, $4\frac{1}{10}$ inches; tail, 3 inches; tarsi, $\frac{9}{10}$ inch; middle toe, including the claw, $\frac{8}{10}$ inch; claw, $\frac{1}{4}$ inch; hind toe, $\frac{1}{2}\frac{3}{0}$ inch; claw, $\frac{7}{2}\frac{}{0}$ inch; bill, $\frac{1}{2}$ inch; to the corner of the mouth, $\frac{3}{4}$ inch. Male.

Female nearly of the same size and appearance, but lighter in colour, and inclining to tawny on the back.

They were seen in considerable numbers during the month of May; were commonly on the ground, and formed one of the characteristics

of the road from Valparaiso to St. Jago, in Chili. They scratch amongst straw and other remains of food, left by the oxen used in carts to carry merchandise to and from the capital.

PYRANGA LUDOVICIANA.—(Wils.)

Louisiana Tanager. *Tanagra Ludoviciana.* Wilson, Am. Orn., vol. iii. p. 27.
Louisiana Tanager. *Pyranga Ludoviciana.* Audubon, Birds of America, vol. iii. p. 231, pl. 210.

Collection Exp. Exp.

Was observed in most of the woody districts of Oregon.

BUCERIDÆ.

BUCEROS OBSCURUS.—(Nob.)

Plate XXXIII.

Collection Exp. Exp.

B. capite, collo partibusque omnibus corporis inferioribus cum femoribus pallidè fulvis: pectoris lateralibusque capitis plumis aliquot paucis pallidè castaneis: dorso uropygioque pallidè lividis: scapularibus tegminibusque alarum pallidè lividis, apice fulvis: alis rotundatis; remigibus saturatè brunneis, fulvo marginatis; ex primariis quintâ longissimâ, huic vero sextâ septimâque ferè æqualibus, acuminatis, rhachibus fusco-brunneis: caudâ decem constante plumis, modicè rotundatâ, fulvâ, scapis albis; intermediis rectricibus binis, secundùm dimidium basale, diluto-lividis: rostro nigro, cujus inflata summitas, post oculos, in vertice, rotunda evadit, dertrum autem in carinam angustam comprimitur: iride carmesinâ; pedibus concoloribus at pallidioribus. Femina.

Head, neck, and all the lower portion of the body and thighs, pale tawny yellow; a few pale chestnut-coloured feathers on the breast, and sides of the head; back and rump pale chocolate-brown; scapulars and wing-coverts pale chocolate, with tawny tips; wings rounded; quills dark brown, edged with tawny; fifth primary longest, the sixth and seventh nearly equal to the fifth, pointed, and the shafts dark brown: tail consisting of ten feathers, slightly rounded, tawny, with white shafts, the two middle feathers clouded with pale chocolate on the half nearest the body: bill black, inflated to a rounded termination on the crown beyond the eyes, the front edge compressed to a narrow keel: irides crimson: feet the same, paler. Female.

Total length, $34\frac{6}{10}$ inches; wing, from the carpal joint, $14\frac{7}{10}$ inches; tail, $12\frac{8}{10}$ inches; tarsi, $2\frac{2}{10}$ inches; middle toe, including the claw, $2\frac{7}{10}$ inches; claw, $\frac{9}{10}$ inch; hind toe, $1\frac{3}{20}$ inch; claw, $\frac{8}{10}$ inch; bill, measuring from the crown of the head over the culmen, $7\frac{9}{10}$ inches; along the gonyx, $5\frac{3}{10}$ inches; along the commissure, $5\frac{4}{10}$ inches; width, $1\frac{8}{10}$ inch; depth, $2\frac{8}{10}$ inches.

Near Sambuangu, on the Island of Mindoro, we saw large flocks of Hornbills, which frequented deep shady forests; some were of a brick-red colour, and were probably the males of the one now described, and figured.

Although several were shot, such was the nature of the *jungle*, that we succeeded in obtaining but a single specimen: all of its plumage is fully developed, though scanty, a wise provision in so hot a climate, and is much worn, showing that our bird was fully grown. The voice is not unlike that of a man hoarse from loud calling; it was heard in the close forest a distance of half a mile or more.

SCANSORES.

PSITTACIDÆ.

PLATYCERCUS SPLENDENS.—(Nob.)

PLATE XXXIV. FIG. 1. FEMALE. 2. YOUNG.

Collection Exp. Exp.

P. capite, pectore, abdomine anoque carmesino nitidis, in coccineum vergentibus: dorso, uropygio, tegminibus alarum caudæque smaragdino splendentibus: nuchâ, primariis caudâque cobalticis; plumis caudalibus intermediis basi viridibus, gradatim, ad apicem usque cyaneum, cœrulescentibus: dorsi plumis ad basin obscuro-ardesiacis; pectoris concoloribus, at in medio viridibus, exinde lætè coccineis: occipitali maculâ albâ, invisibili partim propter carmesinum, partim propter cœruleum: alis caudâque subtùs nigris: remigum quartâ longissimâ, quatuor primis nonnihil gradatis: iride aurantio-nitidâ: rostro tibiisque nigris.

Head, breast, belly, and vent, bright crimson, inclining to scarlet; back, rump, wing and tail coverts brilliant emerald-green; nape of the neck, primaries, and tail, cobalt-blue; the middle tail feathers green at the base, which runs gradually into the clear blue of their tips; back feathers dark slate-colour at their roots; those of the breast the same, but green in the middle, succeeded by a bright scarlet, which covers the whole; a white spot on the occiput is covered from view, partly by crimson, and partly by the blue: wings and tail black beneath; fourth quill longest, the first four slightly graduated: irides bright orange: bill and legs black. Adult female.

Total length, 18 inches; extent of wings, 26 inches; from the carpal joint, $9\frac{1}{2}$ inches; tail, $8\frac{4}{10}$ inches; tarsi, $\frac{8}{10}$ inch; middle toe, in-

cluding the claw, $1\frac{1}{2}$ inch; claw, $\frac{1}{2}$ inch; outer hind toe, $1\frac{3}{20}$ inch; claw, $\frac{4}{10}$ inch; inner hind toe, $\frac{11}{20}$ inch; claw, $\frac{3}{10}$ inch; bill, 1 inch; its commissure, $\frac{3}{10}$ inch; its depth, $1\frac{2}{10}$ inch.

P. femina juvenis: capite, dorso, uropygio caudâque viridibus: alis cœrulescentibus: super pectus maculâ irregulari aurantiaco-flavescente, ad anum usque protentâ: crisso viridi: fronte, regione ophthalmicâ guttureque nigris: alis caudâque subtùs nigris; remigum scapis nigris: maculâ occultatâ occipitis albâ: plumis reliquis omnibus ad basin ardesiaco-nigricantibus: dimensionibus corporis per omnia eisdem ac in adultæ: rostro nigrescenti-brunneo.

Young female. Head, back, rump, and tail, green; wings pale blue; breast with an irregular orange-yellow spot extending to the vent; under tail coverts green; front, ophthalmic region, and throat, black; wings and tail, beneath, black; shafts of the quills black; concealed occipital spot similar to that of the adult; all the rest of the feathers dark slate-colour at their roots; bill blackish-brown. In size like the adult.

This beautiful species differs but little from the following (*P. atrogularis*) in size and general appearance; the principal distinguishing characters being a straight tail, that of Atrogularis being curved, and in its smaller bill with a rounded gonyx, besides a more delicate and graceful figure, lighter and more brilliant colours, bright crimson head and under parts in place of dark crimson.

It was found inhabiting the shores of Peale's River, at the Island of Viti-levu, (Great Feejee,) and first attracted our attention by its remarkable flight as it passed the open spaces in the forest, or crossed the river. It flaps its wings usually three times, and then soars a short distance, repeating the three flaps and a soar, crying at each soar, cay-au, cay-au. When feeding they are generally silent.

PLATYCERCUS ATROGULARIS.—(Nob.)

Plate XXXV.

Collection Exp. Exp.

P. capite, pectore, ventre anoque obscurè carmesinis, singulis plumis basi saturatè artesiacis, medio viridibus, apice obscurè carmesinis: dorso, alarum parte superiori, uropygioque smaragdino splendentibus; plumis ad basin nigris, in medio fasciâ viridi præditis, quæ, nisi plumæ erigantur, conspici nequit; quod similiter de maculâ occipitali albâ prædicandum: fronte genisque nigricantibus; genarum plumis anterioribus cæruleo delicatè tinctis: gutture atro: primariis gradatis, supernè cæruleo splendentibus, subtùs nigris; quartâ longissimâ; rhachibus nigris; secundariis item cærulei coloris sed pallidioribus, qui color gradatim in viridi-splendentem scapularium vergit: tectricibus alarum minoribus viridi-splendentibus; subjacentibus autem apice carmesinis: caudam componentibus plumis duodecim cæruleo-splendentibus, quarum sex intermediæ viridi iridescunt; omnibus infrà nigris, scapis concoloribus: rostro cærulescenti-corneo, pervalido, culmine distento, rotundato; gonyde angulari, lateribus erectis; mandibulæ superiori crenâ acutâ: naribus ferè rotundis, plumulis setaceis quæ rostri basin circumdant, partim obtectis: tibiis unguibusque nigris.

Head, breast, belly, and vent, dark crimson; each feather dark slate-colour at the root, green in the middle, and dark crimson at the tip: back, upper part of the wings, and rump, brilliant emerald-green; feathers black at their roots, a green bar crossing the middle, which is not visible without raising them; which is also the case with a white spot on the occiput: nuchal spot blue: front and cheeks very dark, the interior feathers of the cheeks delicately tinged with blue; throat black: primaries graduated, brilliant blue above, black beneath; fourth quill longest; shafts black; secondaries lighter blue, which gradually runs into the brilliant green of the scapulars; lesser coverts brilliant green, those of the under part of the wing tipped with crimson: tail consisting of twelve brilliant blue feathers, the six centre ones having green reflections; all are black

beneath, with shafts of the same colour; bill bluish horn-colour, very strong, the culmen full and rounded; gonyx angular and elevated at the sides; upper mandible with a sharp notch; nostrils almost round, and partly hid in the rigid short feathers at the base of the bill: legs and claws black: irides bright orange. Male.

Total length of an adult male, $19\frac{7}{8}$ inches; extent of the wings, 29 inches; tail, $9\frac{1}{2}$ inches.

Another specimen measured but $17\frac{1}{2}$ inches in length, and $25\frac{3}{4}$ inches in extent of wings. In general form it is more robust than *P. splendens*, and the tail is more curved.

In our numerous excursions along the shores of the Feejee Islands, we met this bird only on the low inundated lands, and almost always during the heat of the day, in the thick foliage of the Mangroves, which skirt most of the bays. They sit silently, sheltered from the scorching rays of the sun, and sally forth in the evening, or early in the morning; vociferating loudly while flying, "vang-ha, vang-ha," a name by which they are known to the natives. Their flight is irregular, their broad and curved tail being spread widely, and undulated between each flap of the wings, which gives the body a pitching motion, distantly resembling the flight of a butterfly. The fruit of the Mangrove constitutes the principal part of their food.

We supposed this species at first to be the Tabuan Parrot of Latham (Gen. Hist. of Birds, vol. ii. p. 115), and the Pompadour Parrot of Shaw (vol. viii. p. 409); but that we find is represented with a green throat and yellow legs: these parts are black in our species in all states of their plumage. Should it, however, prove to be identical, it will be the only example within our scope of observation in the Pacific, of one species of Parrot inhabiting two groups of islands.

PICIDÆ.

COLAPTES MEXICANUS.—(Sw.)

Colaptes Mexicanus. Swainson. Synopsis of the Birds of Mexico. Philosophical Magazine, June, 1837, No. 84, p. 440.
Red-shafted Woodpecker. Audubon, Birds of America, vol. iv. p. 290, pl. 294.

Collection Exp. Exp.

This species was seen in various places on the West Coast of America, from Puget's Sound in the north of Oregon, to California; it was most common in the southern part of that country, and observed to entirely replace the *Auratus*, or Golden-winged Woodpecker, which was not seen by the members of the Expedition while in that country. In the upper parts of California, we frequently saw large pine trees pierced with innumerable holes, appearing as though they had been used as targets for infantry practice with muskets; on a close examination of the holes, they were found to be seldom more than an inch or two in depth, and instead of musket-balls, many of them were filled at the bottom by a hazel-nut: it was the contrivance of this, and the next species of Woodpecker, to hold the nut while they pierced it with their bills.

PICUS TORQUATUS.—(Wils.)

Lewis's Woodpecker. *Picus torquatus.* Wilson, American Orn., vol. iii. p. 31.
Lewis's Woodpecker. *Picus torquatus.* Audubon, Birds of America, vol. iv. p. 280, pl. 272.

This bird is quite numerous in every part of Oregon, where there

is timber, during the summer; and probably winters in California: we saw them evidently migrating in that direction in the latter part of the summer.

Picus ruber, Gm., and *P. Harrisii*, Audubon's Birds of America, were both obtained in Oregon, and observed as far south as the Bay of San Francisco, in California. In our rapid transit through the country, nothing peculiar was observed in their habits.

MEIGLYPTES FUSCUS.—(Nob.)

Plate XXXVI. Fig. 1.

Collection Exp. Exp.

M. flavescenti-brunneus: dorso, alis caudâque fulvo irregulariter fasciatis: pectore ferè nigro, maculâ fulvâ ex utroque latere, et secundùm partem inferiorem, lineis quinque fulvis notato: mandibulâ superiori cærulescenti-nigrâ; inferiori propè basin rictumque virescenti: pedibus magnis, validis; digito postico interiori parvissimo.

Yellowish-brown; back, wings, and tail crossed by irregular tawny bars: breast nearly black, crossed on the lower part by fine tawny lines; throat crossed by numerous tawny lines; a tawny spot on each side of the breast: upper mandible blue-black; the lower mandible greenish near the base and lower angle: feet large, strong; the inner hind toe very small.

Total length, $8\frac{1}{2}$ inches; wings, from the carpal joint, $4\frac{4}{10}$ inches; tail, $2\frac{7}{10}$ inches; tarsi, $\frac{8}{10}$ inch; outer front toe, including the claw, $\frac{9}{10}$ inch; claw, $\frac{9}{20}$ inch; versatile or outer hind toe, $\frac{9}{10}$ inch; claw, $\frac{3}{10}$ inch; inner hind toe, $\frac{7}{20}$ inch; nail $\frac{3}{20}$ inch; bill, $\frac{17}{20}$ inch; to the angle of the mouth, $1\frac{1}{10}$ inch.

Inhabits the Malay peninsula. Our specimen was obtained at Singapore.

BUCCO RUBRITORQUIS.—(Nob.)

PLATE XXXVI. FIG. 2.

Collection Exp. Exp.

B. fronte lineâque utrobique verticis aureo-flavis: summo capite, caudæ partibus subjacentibus guttureque diluto-cæruleis: loris nigris: genis, superciliis, pectore atque abdomine pallidè viridibus; illis verò dorso, alis caudâque obscurioribus: collari angusto rutilo cervici trajecto; maculâ ejusdem coloris utrobique pectoris ad marginem inferiorem cærulei: rostro nigro: tibiis plumbeis.

Front, and line each side of the crown, golden-yellow; crown, throat, and under parts of the tail, light blue; lores black; cheek, brows, breast, and belly, light green; back, wings, and tail, darker; a narrow collar or band of bright red crosses the back part of the neck; there is a spot of the same bright red on each side of the breast at the lower edge of the blue; bill black; legs lead-colour.

Total length, $7\frac{8}{10}$ inches; wing, from the carpal joint, $4\frac{7}{10}$ inches; tail, $2\frac{3}{20}$ inches; tarsi, $\frac{9}{10}$ inch; middle toe, including the claw, $\frac{9}{10}$ inch; claw, $\frac{3}{10}$ inch; versatile, or outer hind toe, $\frac{3}{4}$ inch; claw, $\frac{1}{4}$ inch; inner hind toe, $\frac{4}{10}$ inch; claw, $\frac{2}{10}$ inch; bill, $\frac{9}{10}$ inch; to the corners of the mouth, $1\frac{1}{4}$ inch.

Five specimens of this bird were obtained at Singapore; they do not vary in plumage.

CUCULIDÆ.

COCCYZUS SENICULUS.

The Mangrove Cuckoo. *Cuculus seniculus.* Latham, Gen. Hist. of Birds, vol. iii. p. 315.
The Mangrove Cuckoo. *Coccyzus seniculus.* Audubon, Birds of America, vol. iv. p. 303, pl. 277.

Collection Exp. Exp.

Near Callao, in Peru, we killed a Cuckoo that was moulting, which on dissection, proved to be a female; it was an adult, but too imperfect in plumage to prove that it was specifically different from the one bearing the above name. It differs in being smaller, in having the auriculars nearly black, and in having but four white spots on the tail; only the two outer feathers on each side being tipped with white; irides brown; eyelids margined with yellow; bill black.

Peruvian specimen: total length, $10\frac{1}{2}$ inches; extent of wings, $13\frac{1}{2}$ inches.
Florida specimen: total length, 12 inches; extent of wings, 15 inches.

CUCULUS SIMUS.—(Nob.)

PLATE XXXVII. FIG. 1.

Collection Exp. Exp.

C. rostro, more insolito, lato complanatoque: vertice, dorso alisque olivaceis, nonnihil æneo-nitentibus: gutture atque auricularibus cinera-

scenti-griseis: pectore, abdomine, crissoque rufescentibus: caudâ paululùm cuneatâ, nigrâ, cærulescenti-irescente; omnibus plumis, intermediis exceptis, albo fasciatis apicibusque albis, fasciis albis nigrisque super radios externos atque internos extimarum binarum alternantibus: alis acuminatis angustisque; remige tertiâ longissimâ, quartâ aliquantulò illâ breviore: guttâ albâ super pogonium externum cujusque plumæ remigis fasciam, alis extensis, efformante; tegminibus inferioribus rufescentibus: mandibulâ superiori infuscatâ; inferiori necnon et rictu aurantiis: palpebris pedibusque diluto-flavis: unguibus nigris. Mas.

Bill unusually broad and flattened; crown, back, and wings, olive-brown, with a slight bronze lustre; throat and auriculars cinereous gray; breast, abdomen, and under tail-coverts, rufous; tail somewhat cuneate, black, with a bluish lustre; all but the middle feathers tipped and blended with white; on the two outer feathers the black and white bands alternate on the inner and outer webs: wings pointed and narrow; the third quill longest, fourth slightly shorter; a white spot on the inner web of each quill, forming a band when the wing is extended; under coverts pale rufous: upper mandible dusky; lower mandible, and corners of the mouth, orange: eyelids and feet pale yellow; iris light yellowish-brown: claws black. Male.

Total length, 10 inches; extent of wings, $14\frac{1}{2}$ inches; tail, $5\frac{3}{20}$ inches; outer feathers, 4 inches; tarsi, $\frac{8}{10}$ inch; middle toe, including the claw, $\frac{19}{20}$ inch; claw, $\frac{3}{10}$ inch; outer hind toe, $\frac{8}{10}$ inch; claw, $\frac{1}{4}$ inch; inner hind toe, $\frac{9}{20}$ inch; claw, $\frac{2}{10}$ inch, it is much curved; bill, $\frac{13}{20}$ inch; to the corners of the mouth, 1 inch; breadth at the nostrils, $\frac{4}{10}$ inch.

The specimen from which our description is drawn, was in perfect plumage when killed at Sandal-wood Bay, in the Feejee Islands, on the 20th of July. Its voice was not heard; its actions were somewhat remarkable; the common position when sitting on a branch was, with the body almost perpendicular, its subcrest frequently raised after the manner of some of the Hawks, and Tyrant Flycatchers.

CUCULUS FUCATUS.—(Nob.)

PLATE XXXVII. FIG. 2.

Collection Exp. Exp.

C. vertice, dorso uropygioque fusco-cineraceo-griseis: alis fuscescentibus: auricularibus, gutture pectoreque pallidè cinerascentibus: abdomine crissoque diluto-ochraceis, fasciisque nigris undulatim notatis: caudâ rotundatâ, fuscescenti, apice margineque exteriori, nigrâ; singulis plumis apice albis, scapos maculis quinis senisve albis elongatisque connotantibus, maculis autem pluribus dontoïdeis radios internos ad marginem ornantibus: alis longis, acuminatis: remigum tertiâ longissimâ; secundâ quartâque æqualibus; primariis, secundùm pogonium internum albo fasciatis; secundariarum dimidio basali pogonii interioris albo; tegminibus inferioribus luteolis, nigro lineatis: iride diluto-brunneâ: palpebris pedibusque flavo nitidis: rostro ad basin flavo; mandibulâ superiori olivaceâ, apice nigrâ; mandibulâ inferiori penitùs olivaceâ: faucibus aurantiis. Mas.

Crown, back, and rump, dark ashy gray: wings fuscous: auriculars, throat, and breast, light cinereous-gray; abdomen and under tail-coverts pale ochre-yellow, crossed by waving lines of black: tail rounded, dusky, black at the end and outer margin; each feather tipped with white, and having five or six lengthened white spots on the shafts, and more numerous notch-like spots on the edge of the inner web: wings long, pointed; third quill longest, second and fourth equal; primaries banded with white on the inner webs; secondaries having the basal half of the inner webs white; under coverts buff, crossed with black lines: irides light brown; eyelids and feet bright yellow: bill yellow at the base; upper mandible olive, black at the tip; lower mandible olive its whole length; inside of the mouth orange. Male.

Total length, 12 inches; extent of the wings, 20 inches; wings, from the carpal joint, $7\frac{1}{2}$ inches; tail, $5\frac{7}{10}$ inches; outer feathers, $4\frac{3}{10}$

inches; tarsi, $\frac{13}{20}$ inch; middle toe, including the claw, 1 inch; claw, $\frac{7}{20}$ inch; outer hind toe, $\frac{8}{10}$ inch; claw, $\frac{2}{10}$ inch; bill, $\frac{7}{10}$ inch; to the angle of the mouth, $1\frac{1}{20}$ inch; width at the nostrils, $\frac{3}{10}$ inch.

The specimen was killed on the Island of Mangsi, in the Sooloo Sea; it was sprightly in its actions, and did not utter any cry within our hearing.

CENTROPUS NIGRIFRONS.—(Nob.)

Plate XXXVIII. Fig. 1.

Collection Exp. Exp.

C. fronte genisque nigris; capite, collo, gutture atque pectore albis, flavo tinctis, plumarum texturâ præter morem solutâ; humeris alisque castaneis; caudâ corporeque, femoribus inclusis, nigris, cæruleo viridique irescentibus; rostro nigro; tibiis griseis; iride carmesinâ.

Front and cheeks black; head, neck, throat, and breast white, tinged with yellow, the feathers unusually open in their texture; shoulders and wings chestnut-brown; tail and body, including the thighs, black, with blue and green reflections; bill black; legs gray; irides crimson.

Total length, $18\frac{2}{10}$ inches; wings, from the carpal joint, $7\frac{3}{20}$ inches; tail, $9\frac{1}{2}$ inches; outer feathers, $4\frac{3}{10}$ inches; tarsi, $1\frac{7}{10}$ inch; middle toe, including the claw, 2 inches; claw, $\frac{1}{2}$ inch; outer hind toe, $1\frac{7}{10}$ inch; claw, $\frac{1}{2}$ inch; inner hind toe, claw not included, $\frac{6}{10}$ inch; claw of the right foot, $\frac{3}{10}$ inch; left foot, $\frac{7}{10}$ inch; bill, $1\frac{4}{10}$ inch; to the angle of the mouth, $1\frac{7}{10}$ inch.

A single specimen was killed in a jungle near La Caldera, on the Island of Mindanao. It was sprightly and quick in its actions.

EUDYNAMYS ORIENTALIS.—(L.)

Eastern Black Cuckoo. *Cuculus Orientalis.* Latham, Gen. Hist. of Birds, vol. iii. p. 282 (male).
Mindanao Cuckoo. *Cuculus Mindanensis.* Latham, Gen. Hist. of Birds, vol. iii. p. 283 (female).

Collection Exp. Exp.

A fine male of this species was killed in the month of February, near Soung, the capital of the Sooloo Islands. The plumage was very glossy, the iris bright red, and the bill and legs blue-green; all of which is lost in the prepared skins. At the Island of Mangsi, we again saw them, during a heavy storm of rain and wind, and heard them utter a loud and clear whistle, whenever disturbed by the firing of guns, or the falling of trees.

Total length, $15\frac{4}{5}$ inches; wing, from the carpal joint, $8\frac{4}{5}$ inches; tail, $7\frac{8}{10}$ inches; outer feathers, $6\frac{1}{10}$ inches; tarsi, $1\frac{1}{4}$ inch; bill, 1 inch; to the corners of the mouth, $1\frac{1}{4}$ inch; fourth quill longest; fifth, equal.

A female, obtained at the same time and place, differs materially from Latham's description, being of a dark sepia-brown colour above, beautifully spotted with rufous; it has the chestnut-coloured lines on the head. Beneath, it is tawny, brightest on the breast, where it is lineated with black; the belly crossed with black bars; irides bright crimson; bill and legs blue-green.

Total length, $15\frac{1}{2}$ inches; extent of wings, 23 inches; tarsi, $1\frac{1}{4}$ inch; bill, 1 inch; to the corners of the mouth, $1\frac{4}{5}$ inch; tail, $7\frac{4}{5}$ inches; outer feathers, 6 inches; fourth quill longest.

EUDYNAMYS AUSTRALIS.—(Sw.)

Eudynamys Orientalis. Vigors et Horsfield. Lin. Trans., vol. xv. p. 304.

Eudynamys Australis. Swainson. Lardner's Cabinet Cyclopædia. Two centenaries and a quarter, new or imperfectly described birds, No. 189.

Collection Exp. Exp.

Specimens of both sexes of this bird were obtained in Australia. We find it difficult, at first sight, to distinguish the males from the Oriental Cuckoo; the general aspect is the same, but the bill is more slender, and not so much bent at the point. The only characters by which they can readily be distinguished, we find to be in the wings: those of the Australian specimens are pointed, and have the third quills longest; the Oriental has the fourth quills longest.

The females are very different in appearance from the Oriental Eudynamys, being much lighter in colour, having white in place of rufous spots above, and much narrower brown lines on the breast.

EUDYNAMYS CUNEICAUDA.—(Nob.)

Plate XXXVIII. Fig. 2.

Collection Exp. Exp.

E. supernè sepiaco-brunnea; vertice lineis rufescentibus, dorso autem maculis albis, notatis: subtùs alba, plumas lineis medianis sepiacis connotantibus; lineâ superciliari, genarum fasciâ guttureque fulvescentibus; alis mediocribus, acuminatis, remigum quartâ longissimâ, huic tertiâ ferè æquali; sepiacis, albo fasciatis; rhachibus albis; tegminibus inferioribus albis; superioribus sepiacis, guttâ albâ terminali rotundâ præditis; scapularibus albo vittatis, alboque ad modum

tectricum, punctulatis: caudâ cuneatâ, plumis acuminatis, sepiaco-brunneis, fasciis numerosis ex albo fulvescentique undulatim variegatis; scapis desuper brunneis, subtùs albis; tegminibus superioribus brunneis, albo vittatis; inferioribus albis: mandibulâ superiori brunneâ; inferiori lutescente: tibiis furvis.

Above sepia-brown, with rufous lines on the crown, and white spots on the back; beneath white, the feathers having central lines of sepia-brown; superciliary line, band on the cheek, and throat, pale tawny; wings moderate, pointed, fourth quill longest; third nearly equal; colour sepia-brown, banded with white; shafts white; under coverts white; upper coverts sepia-brown, with a terminal round white spot; scapulars banded with white, and having a terminal white spot like the coverts: tail cuneate, the feathers pointed, sepia-brown, crossed by numerous curved bars of white and pale tawny; shafts brown above, white beneath; upper coverts brown, barred with white; lower coverts white: upper mandible brown; lower mandible pale yellow: legs dusky.

Total length, $15\frac{2}{10}$ inches; wings, from the carpal joint, $7\frac{2}{10}$ inches; tail, $8\frac{1}{10}$ inches; outer feather, $4\frac{3}{10}$ inches; tarsi, $1\frac{3}{10}$ inch; middle toe, including the claw, $1\frac{1}{4}$ inch; claw, $\frac{4}{10}$ inch; outer hind toe, $1\frac{1}{10}$ inch; claw, $\frac{3}{10}$ inch; inner hind toe, $\frac{6}{10}$ inch; claw, $\frac{3}{10}$ inch; bill, $\frac{9}{10}$ inch; to the angle of the mouth, $1\frac{4}{10}$ inch.

A single specimen was shot at the Island of Ovolau, one of the Feejees, in the month of May, and unfortunately the record of sex, and the colour of the irides was lost.

PHŒNICOPHÆUS NIGRIVENTRIS.—(Nob.)

Plate XXXIX. Fig. 1.

Collection Exp. Exp.

P. capite, collo pectoreque fusco-cinereis; dorso, alis, caudâque metallicè cyaneo-iridibus; ano nigricante; caudâ longâ, cuneatâ, albato apice: alis rotundatis; remigum quartâ, quintâ sextâque æqualibus et lon-

gissimis: genas papillis rubris contegentibus, juxta rostrum setis brevibus nigris marginatas: rostro validiori minùsque longo quam in P. Sumatrano; naribus subrotundis pyriformibusve, deorsùm patulis in inflatâ basi rostri.

Head, neck, and breast, dark cinereous gray; back, wings, and tail, dark metallic blue-green; vent dusky black; tail long, cuneate, and tipped with white: wings rounded, fourth, fifth, and sixth quills, equal, and longest: cheeks covered with red papillæ, margined next the bill with short black bristles: eyelashes composed of strong black bristles; bill stouter, and not so long as that of P. Sumatranus;* nostrils nearly round, or pyriform, and opening downwards in the inflated base of the bill.

Total length, 14 inches; wings, from the carpal joint, $5\frac{4}{10}$ inches; tail, 8 inches; the outer feathers, $4\frac{1}{10}$ inches; tarsi, $1\frac{1}{4}$ inch; middle toe, including the claw, 1 inch; claw, $\frac{3}{10}$ inch; outer hind toe, $\frac{9}{10}$ inch; claw, $\frac{2}{10}$ inch; inner hind toe, $\frac{1}{2}$ inch; claw, $\frac{2}{10}$ inch; bill, $1\frac{1}{20}$ inch; to the corners of the month, $1\frac{1}{4}$ inch.

a. BILL OF PHŒNICOPHÆUS SUMATRANUS, NATURAL SIZE.

b. BILL OF PHŒNICOPHÆUS NIGRIVENTRIS, NATURAL SIZE.

* Cuculus Sumatranus, or Sepando, of the Sumatrans. Sir T. S. Raffles. Lin. Trans., vol. xiii. p. 287.

The principal difference between this bird and *P. Sumatranis*, is in the bill, form and position of the nostrils, black instead of rufous ventral feathers, and in the arrangement of the quills; the fifth, sixth, and seventh, being longest in the *Sumatranus*, while the fourth, fifth, and sixth, are longest in *Nigriventris*, which is also less in size. In general appearance both resemble each other. Specimens of each were obtained at Singapore; also *P. Javanicus*, of Dr. Horsfield, and *P. tricolor*, of Dr. Shaw.

ANADÆNUS RUFICAUDA.—(Nob.)

Plate XXXIX. Fig. 2.

Collection Exp. Exp.

A. capite, collo pectoreque diluto-cineraceis: dorso, alis caudâque pallidè castaneis: ano, femoribus, crissoque pallidioribus: caudâ cuneatâ, quam decem plumæ latæ componunt, fasciis apicalibus nigris notatæ, apicibus albis: alis rotundatis, ex remigibus sextâ longissimâ; omnibus ad apicem fuscescenti-nigris: rostro viridi: tibiis plumbeis.

Head, neck, and breast, light cinereous gray: back, wings, and tail, light chestnut; vent, thighs, and under tail-coverts, paler: tail cuneate, composed of ten broad feathers, with black terminal bands and white tips: wings rounded, sixth quill longest, all the quills tipped with sepia-brown: bill green: legs lead-colour.

Total length, $12\frac{3}{10}$ inches; wings, from the carpal joint, $4\frac{7}{10}$ inches; tail, $6\frac{8}{10}$ inches; outer feathers, $3\frac{1}{2}$ inches; tarsi, $\frac{9}{10}$ inch; middle toe, including the claw, $\frac{8}{10}$ inch; claw, $\frac{1}{4}$ inch; outer hind toe, $\frac{7}{10}$ inch; claw, $\frac{2}{10}$ inch; inner hind toe, $\frac{1}{2}$ inch; claw, $\frac{2}{10}$ inch; bill, 1 inch; to the corner of the mouth, $1\frac{2}{10}$ inch.

This bird bears a strong resemblance in form and size to the "Booboot," of Sumatra;* so much that we fear when a better knowledge is obtained of its habits, and changes of plumage, that our *rufi-cauda* will prove to be no more than the adult male; but with our present knowledge we feel constrained to represent it as a different species. Specimens of the Booboot were also obtained with the rufi-cauda, at Singapore.

* *Cuculus chlorophæus.* Sir T. S. Raffles, Lin. Trans., vol. xiii. p. 288. *Anadænus rufescens.* Swainson. Two centenaries and a quarter, new or hitherto imperfectly described birds. Lardner's Cabinet Cyclopædia-Menageries, No. 193.

TENUIROSTRES.

MELIPHAGIDÆ.

MELIPHAGA? CARUNCULATA.

(PLATE XLII. FIG. 2.)

Certhia carunculata. Latham. In Orn., i. 295.
Carunculated Honey-eater. Latham, General History of Birds, vol. iv. p. 170.
E-yon of the Samoans.
Foulehaio of the Tonga Islanders. Lath.

Collection Exp. Exp.

M. supernè fuscescenti-viridis; subtùs pallidior in flavum vergens; alis caudâque fuscescentibus, plumis flavo marginatis; remigum quartâ, quintâ sextâque ferè æqualibus, longitudinem primæ duplo superantibus; caudâ rotundatâ, duodenis constitutâ plumis; rostro nigro; iride brunneâ; tibiis fuscescenti-viridibus; carunculâ, ad basin mandibulæ inferioris, aurantiâ, nudâ, complanatâque, cujus margo anterior cirro plumarum nigrarum confertarumque instructus est, singulis ex hisce plumis in vibrissâ brevi nigrâ desinentibus: scapis plumarum quæ utrobique gutturis jacent setis nigris terminatis: dimidio auricularium inferiori, lineâque, quæ ad rictum usque sese extendit, flavis; linguæ apice, quasi penicillo corneo.

Above dusky green; beneath lighter, and inclining to yellow; wings and tail dusky; the feathers edged with yellow; fourth, fifth, and sixth quills, nearly equal, twice the length of the first; tail rounded, consisting of twelve feathers; bill black; irides brown; legs dusky green; wattle, at the angle of the lower mandible, orange-coloured, naked, and flat, having on its front edge a tuft of close black fea-

thers, each of which terminates in a short black bristle; the shafts of the feathers each side of the throat terminate with black bristles; lower half of the auricular feathers, and a line to the corner of the mouth, yellow: tongue terminating in a corneous brush. Male.

Total length, $8\frac{3}{4}$ inches; extent of the wings, 12 inches; wing, from the carpal joint, $4\frac{3}{10}$ inches; tail, $3\frac{3}{10}$ inches; tarsi, $1\frac{1}{4}$ inch; middle toe, including the claw, $\frac{9}{10}$ inch; claw, $\frac{1}{4}$ inch; hind toe, $\frac{8}{10}$ inch; claw, $\frac{3}{10}$ inch; bill, $\frac{17}{20}$ inch; to the angle of the mouth, $1\frac{1}{10}$ inch.

The females are a trifle less in size than the males, have the wattle less developed, and the yellow line above it less conspicuous; but in other respects they resemble each other, even in garrulity.

We found them to be quite common at Tongatabu, the Samoan, and Feejee Islands. They are very active and thrush-like in their actions; frequent the brush along the woody shores of the islands, and sing very sweetly.

ENTOMIZA? OLIVACEA.—(Nob.)

PLATE XL. FIG. 1.

Collection Exp. Exp.

E. corpore supernè infernèque olivaceo, in fuscescenti-brunneum capitis pectorisque tendente; lineâ flavescenti-olivaceâ ex basi rostri per auriculares protentâ: alis fuscescenti-brunneis; pogoniis externis flavidis: remigum quartâ, quintâ sextâque ferè æqualibus, duplò longioribus quam prima; scapis supernè nigris, subtùs fuscescentibus: caudâ rubescenti-brunneâ; radiis externis flavidis; scapis infrà albis, suprà brunneis; duodecim constante plumis, rotundatâ: rostro nonnisi modicè incurvo, acie mandibularum acutissimâ; mandibulâ superiori in quibusdam exemplaribus dentatâ, in aliis, ut apparet, attritione lævigatâ: linguæ extremitate in penicillum corneum divisâ: rostro intùs biliflavo, extùs nigro: tibiis nigris; palmis flavis: iride pallidè plumbeâ.

Body, above and beneath, olive-coloured, running into a dusky black on the head and breast; a yellowish-olive line runs from the base of the bill through the auriculars: wings dusky brown; the outer webs of the feathers yellowish; fourth, fifth, and sixth quills nearly equal, and double the length of the first; shafts black above, dusky beneath: tail rounded, consisting of twelve reddish-brown feathers, their outer webs yellowish; shafts, white beneath, brown above: bill slightly curved, the edges very sharp; in some specimens the upper mandible is toothed, whilst in others it appears to be worn smooth; tongue divided into a corneous brush at the extremity; inside of the bill yellow, outside black: legs black, soles yellow: irides pale lead-colour.

Total length, $13\frac{1}{2}$ inches; extent of wings, $18\frac{1}{8}$ inches; wings, from the carpal joint, $6\frac{4}{10}$ inches; tail, $5\frac{1}{2}$ inches; outside feathers, $4\frac{3}{4}$ inches; tarsi, $1\frac{7}{10}$ inch; middle toe, including the claw, $1\frac{4}{10}$ inch; claw, $\frac{1}{2}$ inch; hind toe; $1\frac{1}{10}$ inch; claw, $\frac{6}{10}$ inch; bill, $1\frac{1}{2}$ inch; to the corners of the mouth, $1\frac{5}{20}$ inch.

This is a very active and noisy bird, commonly found amongst the blossoms of the cocoa trees, at the Samoan Islands; we sometimes saw them eating ripe bananas. The two sexes are alike in plumage; the female is somewhat more delicate in form than the male, and perhaps not so noisy.

A character which is somewhat peculiar in the plumage of this species, is to be observed on the breast and belly; the feathers on those parts wearing into a notch in their ends, like those which characterize the genus Ptilinopus, of Mr. Swainson; but with this difference, in this species the feathers are perfect when new, but soon *wear* into a notched form.

We saw them on all the islands of the Samoan Group; at Upolu and Tutuila they were most plentiful.

ENTOMIZA? ANGUSTIPLUMA.—(Nob.)

PLATE XL. FIG. 2.

Collection Exp. Exp.

E. figurâ generali tenui, gracili: alis caudâque sepiacis, olivaceo-fimbriatis: verticis nigri singulis plumis lineâ longitudinali pallidâ notatis; colli verò apicibus flavis; oculi margine nigro: auricularibus nigris, quas linea nigra mandibulæ inferioris basi conjungit: gutture albo obfuscato, flavescente imbuto, plumarum extremitate in setas nigras terminatâ: pectore atque abdomine albo tenebricosis, plumis brunneo marginatis: plumis hypochondriorum anique ferruginoso marginatis: dorso olivaceo, plumis lineâ longitudinali albâ maculâque apicali instructis: uropygio olivascenti-brunneo: alis ipsarumque tegminibus subtùs pallidè sepiacis: remigum scapis fuscescentibus; quartâ ex ipsis, quintâ sextâque æqualibus et longissimis, duplò primam longitudine superantibus: caudâ cuneiformi, quam duodecim componunt plumæ apicibus squalidè albis; plumis totius capitis corporisque notabiliter angustis texturâque solutis: rostro tibiisque fusco brunnescenti-nigris.

General form slender, graceful: wings and tail sepia-brown, fringed with olive-green: crown black, each feather having a light longitudinal line; those of the neck tipped with yellow; rim of the eye black: auriculars black, joined to the base of the lower mandible by a black line; throat dusky white, tinged with yellow, the feathers terminating in black bristles: breast and abdomen dusky white, the feathers margined with brown; feathers of the flanks and vent margined with ferruginous: back olive-brown, the feathers having a longitudinal white line and spot at the tip: rump olive-brown: wings and coverts beneath pale sepia-brown: quill-shafts dusky; fourth, fifth, and sixth quills, equal and longest, and twice the length of the first: tail cuneiform, composed of twelve pointed feathers with dusky white shafts; all the plumage of the head and body remarkably narrow, and open in texture: bill and legs dark brownish-black.

Total length, $14\frac{1}{10}$ inches; wings, from the carpal joint, $6\frac{1}{10}$ inches; tail, $6\frac{1}{2}$ inches; outer feathers, $3\frac{3}{10}$ inches; tarsi, $1\frac{7}{10}$ inch; middle toe, including the claw, $1\frac{3}{10}$ inch; claw, $\frac{7}{20}$ inch; hind toe, $1\frac{3}{20}$ inch; claw, $\frac{1}{2}$ inch; bill, $1\frac{3}{10}$ inch; to the corners of the mouth, $1\frac{13}{20}$ inch.

This rare species was obtained at the Island of Hawaii. It is very active, and graceful in its motions, frequents the woody districts, and is disposed to be musical, having most of the habits of the Meliphaga; they are generally found about those trees which are in flower.

We have placed this and the last species in Mr. Swainson's genus Entomiza, with a doubt of the propriety of doing so, but trusting that our figures will prove sufficiently correct to supply the means of a more systematic arrangement.

PTILOTURUS FASCICULATUS.

Genus Ptiloturus. Swainson. Nat. History and Classification of Birds, vol. ii. p. 327.
Merops fasciculatus. Latham. In Orn., i. 275.
Yellow-tufted Honey-eater. Latham. General History of Birds, vol. iv. p. 157.
Oo of the Hawaiians.

Collection Exp. Exp.

The yellow tufts of costal feathers on this beautiful bird, furnished the material for the splendid and costly royal robes, capes, and "lei's," or head-dresses of the Hawaiians in former days. The bunches of feathers called *hulu*, represented in the wood-cut at the end of this article, are still prepared and received in payment of a poll tax to the King; they are afterwards made up principally in "lei's," or head-bands worn by the ladies, and are beautiful but costly ornaments; but few can afford to wear them. The mantles made of these feathers, were, until lately, considered the principal treasures of the crown; now they are not to be seen; the labour of collecting the feathers and attaching them to a network base—a labour of years—being too great. European clothing has entirely superseded the former robes of state.

The "Oo" is found in most of the woody districts of the Island of Hawaii; they frequent the thick foliage of the loftiest trees; in voice and manners, they have some resemblance to the Orioles of North America (*Icterus Baltimore*). The natives capture them by means of bird-lime, and after plucking the yellow feathers from beneath their wings, restore them to liberty until again wanted to assist in paying the royal tax.

Another bird is called *Oo* by the natives; it is *Certhia pacifica*, of Latham, and is found on the Island of Kauai, one of the same group. It also has tufts of yellow feathers which have been collected for the same purpose in former days; theirs are on the thighs, not on the sides as in the genuine Oo; the feathers are smaller, much inferior in beautiful texture, and are no longer collected; both species are black. We killed specimens at Hanalei, a department of the Island of Kauai, where they are found in the woody districts on the mountains.

"HULU," OR TAX OF THE ANCIENT HAWAIIANS.

MYZOMELA NIGRIVENTRIS.—(Nob.)

PLATE XLI. FIG. 1.

Collection Exp. Exp.

M. capite, collo, pectore, lineâ dorsali uropygioque saturatè coccineis: scapularibus, alis, caudâ, ventre crissoque nigris: caudâ rotundatâ: rostro tibiisque nigris: plantis pedum flavis: iride brunneâ.

Head, neck, breast, dorsal line, and rump, bright scarlet; scapulars, wings, tail, abdomen, and under tail-coverts, black: tail rounded: bill and feet black, palms yellow: irides brown.

Total length, $5\frac{1}{8}$ inches; extent of wings, $8\frac{1}{4}$ inches; wings, from the carpal joint, $2\frac{8}{10}$ inches; tail, $1\frac{8}{10}$ inch; tarsi, $\frac{3}{4}$ inch; middle toe, including the claw, $\frac{11}{20}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{1}{2}$ inch; claw, $\frac{1}{4}$ inch; bill, $\frac{13}{20}$ inch; to the corners of the mouth, $\frac{3}{4}$ inch.

In the dark and thick forests of the Samoan Islands, where this bird is not uncommon, its beautiful scarlet and black plumage renders it a conspicuous object; it is seldom seen in the open or cultivated grounds, or near the habitations of man: in this respect differing from most of its congeners. It resembles *Myzomela cardinalis*, which is a native of Australia, but is much larger and more beautifully coloured.

MYZOMELA JUGULARIS.—(Nob.)

PLATE XLI. FIG. 2.

Collection Exp. Exp.

M. capite nigro: collo, humeris dorsoque saturatè olivaceis: gutture coccineo: pectore flavidescenti, in album abdominis crissique pallente: alis obscurè brunneis; margine interiori remigum tectricumque inferiorum albo; marginibus extimis earundem flavis; tectricibus majo-

ribus brunnescenti-flavido marginatis; minoribus ad apicem albis: caudâ rotundatâ, nigrâ, apice albâ: rostro nigro: rictu flavo: tibiis corneis: digitis flavido-obscuris: pedibus subtùs flavis: iridè saturatè brunneâ.

Head black; neck, shoulders, and back, dark olive-brown: throat scarlet; breast buff-yellow, fading into white on the abdomen and under tail-coverts: wings dark brown; inner margins of the quills and under coverts white; outer margins of the quills yellow; greater coverts edged with brownish-yellow; lesser coverts tipped with white: tail rounded, black, tipped with white: bill black: corners of the mouth yellow: legs horn-colour; toes dusky yellow, yellow beneath: irides dark brown.

Total length, $4\frac{1}{2}$ inches; extent of the wings, $7\frac{1}{2}$ inches; wings, from the carpal joint, $2\frac{6}{10}$ inches; tail, $1\frac{1}{2}$ inch; tarsi, $\frac{6}{10}$ inch; middle toe, including the claw, $\frac{11}{20}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{1}{2}$ inch; claw, $\frac{2}{10}$ inch; bill, $\frac{6}{10}$ inch; to the corners of the mouth, $\frac{7}{10}$ inch.

Inhabits the Feejee Islands in cocoa groves; we never saw them in any other situation than amongst the cocoa-nuts and flowers; nectar, and insects collected by the flowers, appear to constitute the principal food of this bird, besides occasional food to some others. Its voice is weak and not remarkable; and as they are solitary, and habitually live amongst the lofty cocoa-nuts, they are seldom observed from below. We were unable to ascertain from the natives what changes take place in their plumage, which we believe must at certain seasons be scarlet on the head and neck, if not on the back; this we are led to infer may be the case, from the fact that several specimens, obtained in the early part of the month of June, at the Island of Venua-levu, had scarlet feathers mixed with the black occipital plumage.

CINNYRIDÆ.

MELITHREPTES VESTIARIA.—(Lath.)

Certhia vestiaria. Latham. Gen. Hist. of Birds, vol. iv. p. 193.
Olokele of the Hawaiians.

Collection Exp. Exp.

This curious and highly-coloured bird is found inhabiting most of the Hawaiian group of islands, where it is one of the most common species. At Oahu, we found them generally about the gigantic lobelias which characterize the botany of that interesting island; they extract their food from the flowers of the lobelia, for which the singularly-formed bill is admirably adapted, as will be seen by the subjoined outlines. The red feathers of this species were usually selected for the ornamental figures on the capes and robes of the ancient Hawaiians, but by reason of their abundance were not so highly valued as those of the Oo.

HEMIGNATHUS OBSCURUS.—(Licht.)

Certhia obscura. Latham. In Orn., i. 281.
Hook-billed Green Honey-eater. Latham. Gen. History of Birds, vol. iv. p. 192.

Collection Exp. Exp.

We obtained specimens of this curious bird at the Island of Hawaii only; it was found inhabiting the thick woody districts, and according to our observations, does not inhabit Oahu or the northern islands of the Hawaiian Group.

HEMIGNATHUS LUCIDUS.—(Licht.)

Collection Exp. Exp.

Found inhabiting the Island of Hawaii, with the above; it is very similar in habits; the form of the bill is admirably adapted to extracting sweets as well as insects from the flowers of the various and gigantic lobelias.

There is another species very much like this, still undescribed; it has a very slender bill, the under mandible not being larger than the upper, and little more than half its length; it differs in other respects, but the only specimen obtained by the Expedition, is too much mutilated to venture specific characters for it: the indication is made to call the attention of future ornithologists visiting that island.

FISSIROSTRES.

MEROPIDÆ.

EURISTOMUS ORIENTALIS.—(Lath.)

Oriental Roller. *Coracias Orientalis.* Latham, Gen. Hist. of Birds, vol. iii. p. 77.
Galgulus Indicus. Brisson, vol. ii. p. 75.
Le Rolle a gorge bleue. Le Vaillant, Hist. Nat. des Oiseaux de Paradis, et des Rolliers.

Collection Exp. Exp.

Our specimens of this beautiful bird were obtained at the Island of Mindanao; we observed them to frequent the banks of shady streams which run through the forests, sitting quietly on horizontal dead branches of the trees, at a considerable elevation, and watching for passing insects, which they caught on the wing. Their appearance, when sitting on a branch, and their flight, was so much like that of a King-fisher (*Alcedo*), that one of our specimens was thus shot by mistake.

The "Dollar Bird" of the colonists in New South Wales, *Euristomus Australis*, of Swainson, is closely allied to *E. Orientalis*, but our specimens are somewhat larger, and not so richly coloured; they are found most commonly in the northern or warmer parts of Australia. A beautiful specimen, killed at Moreton Bay, was added to our collection by Miss MacLeay, daughter of the Hon. Alexander MacLeay, of Sidney, New South Wales.

HALCYONIDÆ.

DACELO NULLITORQUIS.—(Nob.)

Plate XLII. Fig. 1.

Collection Exp. Exp.

D. plumis capitis, colli, dorsi uropygiique olivaceis; alarum coloris armenii, remigum pogoniis internis nigris; tertiâ e primariis longissimâ; tegminibus subjacentibus albis: caudâ subrotundatâ; supernè coloris armenii fuscescentis; subtùs nigrâ; rhachibus nigricantibus; crisso albo: gutture, pectore atque abdomine albis: rostro suprà nigro, infrà albo: tibiis fuscescenti-rubris: plumis totius corporis, gutturis exceptis, quæ sunt penitus albæ, ad basin nigris: iride brunneâ. Mas.

Head, neck, back, and rump, olive-green: wings dusky verditer blue, the inner webs of the quills black; third primary longest; under coverts white: tail slightly rounded; above dusky verditer blue, beneath black, shafts dusky; under coverts white; throat, breast, and abdomen, white: bill, black above, white beneath: legs dusky red; all the plumage black at the roots, excepting that of the throat, which is entirely white: irides brown. Male.

Total length, $7\frac{1}{2}$ inches; bill, $1\frac{1}{10}$ inch; to the gape, $1\frac{4}{10}$ inch; tarsi, $\frac{11}{20}$ inch; middle toe, $\frac{1}{2}$ inch; claw, $\frac{1}{4}$ inch; tail, $2\frac{7}{10}$ inches; wing, from the carpal joint, 4 inches.

A party from the Exploring Squadron crossed the Island of Tahiti, from Point Venus, Matavai Bay, following the course of the River Popino, and crossing Lake Waharea to the opposite coast at Wairidi. The route was both difficult and dangerous, owing to the incessant rains which fall on the upper parts of the mountains, and nourish a profuse vegetation on places so steep that it appeared to us impossible

that the heavy trunks of the "fei's," or wild plantains, arborescent ferns, other plants, and even trees, should find sufficient soil to support their roots. By these, in some places we were obliged to climb in positions which were really frightful, but were gratified by seeing the breeding-places of sundry sea-birds, including the Æthereal Tropic-bird, Petrels, and the pretty Thalassidroma Pacifica, all of which secure their eggs and young in holes; while on the less steep ridges we found Wilkes's Pigeon, Doves, and many smaller birds. In the secluded valleys, the dead silence which generally prevailed, was now and then disturbed by the garrulity of a homely bird, the subject of our present description, as it flew from one dead tree to another, where watching for its prey, which consists of insects, it is usually silent.

This species we found much less plentiful than its congener, the "Sacred Kingsfisher," of Latham, who described it from specimens obtained in Cook's voyages,* or the "Todiramphe Dieu," of M. Lesson,† both of which are larger birds, and well marked by their distinguishing collars.

DACELO VITIENSIS.—(Nob.)

Plate XLIV.

Collection Exp. Exp.

D. mas adultus: vertice, alis caudâque lazulinis: dorso viridi imbuto: uropygio cobaltico: gutture pectoreque albis: collari, ventre, tectricibus alarum caudæque inferioribus pallidè aurantio-brunneis: plumulis infraorbitalibus nigris: auricularibus nigris, apice cæruleis; lineolis nigris ex utrâque regione paroticâ in cervice concurrentibus: lineis superciliaribus aurantio-brunnescentibus, rostro oriundis in occipite conjunctis: remigum secundâ tertiâque æqualibus longissimisque, nigris, externè lazulino, internè lutescente marginatis: caudâ rotun-

* Sacred Kingsfisher. *Alcedo sacra.* Latham, Gen. Hist. of Birds, vol. iv. p. 25.

† Todiramphe Dieu. *Todiramphus divinus.* Lesson, who describes it thus: *Corpore brunneo suprà, albo infrà; collari torquato nigro.* Todiramphe Sacré. *Todiramphus Sacer: corpore et capite suprà viridibus; torquato albo infrà, albo brunneo striato. Mas.* Voyage autour du Monde, exécuté par ordre du Roi, sur la Corvette de Sa Majesté, La Coquille. Zool., tom. i. pt. 2, pp. 686, 687.

datâ duodecim constante plumis, subtùs nigris, scapis fuscescentibus: rostro nigro; mandibulæ inferioris dimidio rosaceo: tibiis fuscescenti-carneis: iride brunneâ.

Adult male: crown, wings, and tail, ultramarine blue: back tinged with green; rump cobalt-blue; throat and breast white: collar, abdomen, under wing-coverts, and under tail-coverts, pale *terra de Sienna*: infra-orbital feathers black; auriculars black, tipped with blue, the black lines continuing backwards until they join on the back of the neck: superciliary lines bright sienna-yellow, they commence at the base of the bill, and join on the hind part of the head: second and third quills equal, and longest; black, margined outwardly with ultramarine blue, and inwardly with pale buff: tail rounded, consisting of twelve feathers, black beneath, and having dusky shafts: bill black, with half of the lower mandible pale blush: legs dusky flesh-colour: irides brown.

Total length, $8\frac{1}{2}$ inches; extent of wings, $12\frac{1}{2}$ inches; wings, from the carpal joint, $3\frac{9}{10}$ inches; tail, $2\frac{3}{4}$ inches; bill, $1\frac{6}{10}$ inch; tarsi, $\frac{6}{10}$ inch; middle toe, including the claw, $\frac{19}{20}$ inch; claw, $\frac{3}{10}$ inch; it is much flattened, curved, and entire; hind toe, $\frac{1}{2}$ inch; claw, $\frac{2}{10}$ inch.

Plate XLIV. Fig. 2.

D. mas juvenis; rostri extremitate magis aduncâ quàm in adultis: capite, alis caudâque cobalticis: dorso virescente-atro; scapularibus cœrulescente-viridibus; uropygio pallidè cobaltico: lineâ superciliari tenui albâ, ad rostri basin flavescente: auricularibus nigris, cobaltico delicatè imbutis: collari albo, nigro marginato, supra quod invenitur fascia obscura flavescens, plumis non erectis, haud conspicienda; plumis singulis ad basin nigricantibus, lineâ flavescenti trajectis, cœruleis apice: gutture, pectore, abdomine crissoque albis: tegminibus alarum subjacentibus flavicantibus: plumis totius corporis, gutturis et tegminum alarum inferiorum exceptis, ad basin nigris: iride brunneâ: remigibus caudâque, subtùs nigrescentibus.

Young male; bill more bent at the point than that of adult birds: head, wings, and tail, cobalt-blue; back greenish-black; scapulars blue-green; rump light cobalt-blue: superciliary line narrow, white, tinged with buff at the base of the bill: auriculars black,

delicately tinged with cobalt: collar white, edged with black, above it there is an obscure bar of buff, which cannot be seen without raising the feathers, all of which are black at the roots, and crossed by a buff line, and tipped with blue; throat, breast, abdomen, and under tail-coverts, white; under wing-coverts pale buff; all the plumage, excepting that of the throat and under wing-coverts, black at the roots; under parts of the quills and tail blackish: irides brown.

A still younger male, killed at the Island of Ovolau on the 12th of May, had all the wing-coverts tipped with rufous; the breast-feathers margined with black; the superciliary lines rufous, and joined on the back of the head.

The females scarcely differ from the males when in full plumage; they are not quite so richly coloured.

This pretty species is distributed over a greater part of the Feejee Group of islands, is solitary in its habits, frequents the mangroves which skirt the inner verge of the coral belts, and is most commonly found near the salt water, where fish and crabs abounding, would lead us to suppose that such was their food, but we never saw them capture anything but insects; fragments of grasshoppers were the ordinary contents of the stomachs of those we dissected.

We were not so fortunate as to find the nests or eggs of this species, but killed numbers of the birds, as they are quite common. The specimens preserved, are in various states of plumage; from them we have selected a male, which we think is in full plumage, to illustrate the species; it was killed at the Island of Venua-levu on the 15th of June. The figure of the young male was drawn from a specimen killed at the town of Mathuata, on the same island, two weeks afterwards. The female is so much like the male, that a figure is unnecessary.

The landscape sketch on the same plate is from a view taken at Mathuata, near where the birds were killed, and will give a tolerable idea of the kind of country the bird inhabits.

DACELO MINIMA.—(Nob.)

Plate XLV.

Collection Exp. Exp.

D. vertice, dorso, alis caudâque cobalticis: uropygio pallidiori: scapularibus cobalticis aliquantulùm viridi tinctis: collari flavescenti, nigro-marginato, supra quod propè jacet macula nuchalis alba quæ conspici non potest nisi plumæ eleventur, prope apicem albo fasciatæ: auricularibus nigris, apice cæruleis: maculâ flavescente utrisque naribus supersedente, quæ in lineolam angustam superciliarem excurrit: gutture albo: pectore, ventre, ano crissoque lutescentibus aut pallidè cinnamomeis, juxta anum saturatissimis, sensim in album quo guttur obducitur pallescentibus: caudâ subrotundatâ, quam duodecim componunt plumæ, subtùs saturatè plumbeæ, rhachibus infrà albis, desuper nigris: alis rotundatis; primariis nigris, margine externo cæruleis; tertiâ ex ipsis longissimâ; primâ quintæ æquali: tectricibus alarum subjacentibus luteolis: plumis omnibus, gutturis exceptis, propè cutem nigris: rostro valdè compresso, formâ ejus similitudinem habente cum illo D. nullitorquis: iride avellaneâ: pedibus cærulescenti-plumbeis. Mas.

Crown, back, wings, and tail, cobalt-blue; rump lighter: scapulars with a slight tinge of green: collar buff, margined with black; just above it a white nuchal spot, not visible without raising the feathers, which have a white band near the end; auriculars black, tipped with blue; a pale buff spot over each nostril, which joins a narrow superciliary line: throat white: breast, belly, vent, and under tail-coverts, buff, or pale cinnamon, darkest near the vent, and gradually fading into the white of the throat: tail slightly rounded, consisting of twelve feathers; dark lead-colour on the under surface; shafts, white beneath, black above; wings rounded, primaries black, the outer edge blue; third longest, first and fifth equal: under wing-coverts buff: all the plumage, except that of the throat, black near the skin: bill much flattened, and shaped like that of D. nullitorquis: irides hazel; feet bluish lead-colour.

Total length, $7\frac{3}{8}$ inches; extent of wings, $11\frac{1}{2}$ inches; wings, from the carpal joint, $3\frac{1}{2}$ inches; tarsi, $\frac{1}{2}$ inch; middle toe, including the nail, $\frac{7}{10}$ inch; nail, $\frac{1}{4}$ inch, broad and flattened to a sharp edge inside; hind toe, $\frac{4}{10}$ inch; claw, $\frac{2}{10}$ inch; tail, $2\frac{3}{10}$ inches; bill, $1\frac{1}{20}$ inch; to the angle of the mouth, $1\frac{1}{2}$ inch. Male.

The dimensions and appearance of the females similar to the males, but they are not so deeply coloured, and the blue inclines to a green.

This is the smallest species of the genus observed by the members of the Expedition; it was found at the Island of Upolu, one of the Samoan or Navigators' Group, and there confined itself within the recesses of the forest. In manners it much resembles the Jacamars (*Galbulæ*), of South America, sitting for hours, as they frequently do, to watch the passing prey. It prefers the shady humid woods: there the snap of its bill, while catching insects by darting from its perch, will probably first call the attention of the hunter to it. Like most, if not all its congeners, it is noisy; the note has nothing but its peculiarity to recommend it; is not so harsh as the Kingfisher's, and, making allowance for the difference of size between our bird, and one found in Australia, *Dacelo gigantea*, its vocal powers will bear comparison; the Australian bird is known to the colonists by the expressive name of "Laughing Jackass."

DACELO CORONATA.—(Nob.)

PLATE XLVI. FIG. 1. MALE. 2. YOUNG FEMALE.

Collection Exp. Exp.

D. summo capite, dorso, alis caudâque cæruleis: auricularibus nigris, apice cæruleis, a quibus linea nigra ad occiput pertingit: gutture, vittâ coronali, collare, pectore, ventre, ano tectricibusque inferioribus caudæ albis: collare albo marginante, luteolo obscurante: fasciâ coronali luteolo marginatâ: tegminibus alarum inferioribus flavidescentibus: remigibus fuscescentibus, margine exteriori cæruleis; scapis subtùs fuscescentibus, suprà nigris: remigum tertiâ quartâque æqualibus, aliquantulò longioribus quàm secunda; primâ quintâque æqua-

libus: caudâ rotundatâ; rhachibus infrà obscuris, desuper nigris: rostro ferè nigro; mandibulæ inferioris dimidio basal albo: tibiis furvescentibus: iride brunneá.

Crown, back, wings, and tail blue; auriculars black, tipped with blue; a black line reaching from them around the back of the head: throat, coronal band, collar, breast, belly, vent, and under tail-coverts, white; collar margined with black, and shaded with buff; coronal band also edged with buff; under wing-coverts pale buff: quills dusky, the outer margins blue; shafts, dusky beneath, black above; third and fourth quills equal, slightly longer than the second; first and fifth equal: tail rounded; shafts, dusky beneath, black above: bill nearly black, lower half of the under mandible white: legs dusky: irides brown.

Total length, 9 inches; extent of wings, $13\frac{1}{2}$ inches; wings, from the carpal joint, $3\frac{8}{10}$ inches; tail, $2\frac{6}{10}$ inches; tarsi, $\frac{6}{10}$ inch; middle toe, including the claw, $\frac{17}{20}$ inch; claw, $\frac{3}{10}$ inch; hind toe, $\frac{1}{2}$ inch; claw, $\frac{2}{10}$ inch; bill, $1\frac{4}{10}$ inch; to the angle of the mouth, $1\frac{18}{20}$ inch. Adult male.

The females when in full plumage resemble the males; that which is represented in Plate XLVI., Fig. 2, is supposed to be in the plumage of the second season, although somewhat larger than the male above described. Its crown, scapulars, back, and lesser wing-coverts, are sepia-brown, with a slight tinge of bluish-green; the coverts being tipped with yellowish-brown; under wing-coverts buff: superciliary line buff in front of the eye, blue-green behind it: auriculars dark brown, throat and collar white; the upper edge of the collar margined with black: breast, belly, and vent, pale buff; the breast feathers tipped with sepia: wings dusky, the outer margins of the feathers obscure blue: tail, above obscure blue, beneath dusky: bill bent at the tip, and the gonys more elevated and angular than is usual in older birds; irides dusky lead-colour. Total length, $9\frac{1}{2}$ inches; extent of wings, $14\frac{1}{2}$ inches.

The subjects of the present descriptions were killed at the Island of Tutuila, on the 14th of March; they did not appear to be so numerous on the other islands of the Samoan Group, although it is believed they inhabit all. We found them frequenting the cocoa-nut

and bread-fruit groves, always in the vicinity of the native habitations. They are now regarded by many as a sort of domestic appendage, but are not sacred, as some of the genus were at the Society Islands when first discovered. It is now difficult to determine which is really the *Alcedo sacra* of historians of the early voyages to the various islands spread over the vast Pacific Ocean, each having a representative, and in some cases several; excepting the Sandwich or Hawaiian Islands: there we did not see or hear of any.

The young birds of all the species of this genus which we have seen, have the upper mandible hooked; the hook gradually wears away as the bill grows, until finally, by the time they are full grown, and the birds have attained the plumage of the second year, there is no vestige of it left.

DACELO VAGANS.

PLATE XLIII. FIG. 1. MALE. 2. YOUNG FEMALE.

Alcedo vagans? Lesson. Voyage de la Coquille, Zool. vol. i. pt. 2, p. 694.
Dacelo albifrons. Peale MSS.

D. mas adultus: maculâ verticis, auricularibus, dorso, alis caudâque cæruleis in viridem vergentibus: vittâ nuchali, collari, gutture, pectore, abdomine anoque candidis: alarum orâ anticâ albâ; primariis nigris, omnium (primæ exceptis, qui nigri sunt) radiis externis cæruleis; quintâ primæ æquali; tegminibus infrà jacentibus albis; rhachibus subtùs fuscescentibus, suprà nigris: caudâ supernè cæruleâ, subtùs nigricante, duodecim constante plumis, scapis subtùs fuscescentibus, suprà nigris: scapularibus viridibus: uropygio pallidè cæruleo: rostro supernè nigro, infernè albo: tibiis sordidè carneis: iride brunneâ.

Adult male: spot on the vertex, auriculars, back, wings, and tail, blue, inclining to green; nuchal band black, broad, distinct, and joining the auriculars: coronal band, collar, throat, breast, belly, and vent, pure white: wings white on the front edge, primaries black, the outer edges of all excepting the first blue; first and fifth equal in length; shafts, dusky beneath, black above: tail, blue

above, dusky beneath, consisting of twelve feathers, the shafts black above, and dusky beneath: scapulars green: rump light blue: bill black above, white beneath: legs dusky flesh-colour: irides brown.

Total length, $8\frac{6}{10}$ inches; bill, $1\frac{4}{10}$ inch; tarsi, $\frac{6}{10}$ inch.

Killed at the Bay of Islands, New Zealand, in the month of March.

D. mas juvenis: vertice dorsoque sepiacis: frontis plumis ad apicem luteolis: capitis lateribus cæruleo tinctis: auricularibus fasciâque nuchali nigrescentibus: gutture albo: colli lateribus, collario, pectore, abdomine anique plumis lutescentibus: pectoris plumarum apice brunneo: alis cærulescenti-viridibus; tectricibus minoribus ad apicem luteolis: tectricibus inferioribus lucido-flavidis: remigum primâ nigrâ, aliquantulò breviori quàm secunda, tertiæ æquali; reliquarum omnium pogonio externo cæruleo: caudâ desuper cæruleâ, subtùs fuscescenti; tegminibus supernis cærulescentibus; inferioribus luteolis: rostro suprà nigro, subtùs albo: tibiis sordidè carneis: iride brunneâ.

Young male: crown and back sepia-brown; feathers of the front tipped with buff; sides of the head tinged with blue; auriculars and nuchal band dusky black: throat white; sides of the neck, collar, breast, belly, and vent, buff; the feathers of the breast tipped with brown: wings blue-green; lesser coverts tipped with buff; under coverts clear buff; first quill black, a trifle shorter than the second, and equal with the third; outer webs of all the others blue: tail blue above, dusky beneath; upper coverts light blue; lower coverts pale buff: bill, black above, white beneath: legs dusky flesh-colour: irides brown.

Total length, $8\frac{6}{10}$ inches; bill, $1\frac{3}{10}$ inch; tarsi, $\frac{6}{10}$ inch.

Killed in the month of March, near the same locality with the above.

D. femina juvenis: summo capite, dorso humerisque atro-sepiacis, circum collare nigris: gutture albo: colli lateribus, pectore, abdomine, collario anoque flavidescentibus: pectoris plumis nigro marginatis: scapularibus olivaceis: remige primâ penitùs nigrâ; reliquarum pogonio externo cæruleo: maculâ anteoculari obscurè luteolâ.

Young female: crown, back, and shoulders, dark sepia-brown; black about the collar: throat white; sides of the neck, breast, belly, collar, and vent, buff; breast-feathers margined with black; scapulars olive-green: first quill entirely black, the others having the outer web blue; a dark buff spot in front of the eye.

Total length, $8\frac{1}{2}$ inches; bill, $1\frac{1}{20}$ inch; tarsi, $\frac{6}{10}$ inch.

Killed at the same time and place. Plate XLIII. Fig. 2.

We found this species common at the Bay of Islands, New Zealand, and at first supposed it could not be anything more than a variety of *Dacelo coronata*, which we had previously seen at the Samoan Islands. But here there are no cocoa-nut or bread-fruit trees, their favourite resort in the Samoan Islands, and consequently their habits must change if it should be the same species; but their voice could not change with a change of food, though their habits might from necessity; and consequently we are constrained to set it down as a distinct species, although we are not satisfied that the specific characters given, are sufficient to enable the ornithological student to distinguish them without comparison, unless in possession of full-plumaged specimens. The young birds can hardly be distinguished, unless it is by the blue on the wings, which, in the Samoan birds, inclines to olive-green, and they have a white collar; whereas the young New Zealand birds have theirs of a buff colour. With full-plumaged specimens there is no difficulty. The total absence of the cinnamon-coloured margin to the crown-spot, and the less brilliant blue of the New Zealand birds, at once distinguishes them.

In the recesses between the numerous promontories in the Bay of Islands, extensive groves of trees (*Abiesenia tomentosa*) may be seen growing in the salt water, like mangroves; these are the resorts of Ducks, Cormorants, and other water-fowl, when the tide rises sufficiently to overflow the soil on which they grow. In such localities we have seen the White-fronted Dacelo perched on a dead branch, patiently watching the small *fish;* it would plunge into the water, seize, and carry its struggling prey to the nearest branch, and there swallow it whole, precisely in the same way, and with as much skill, as a true Kingfisher. At other times we have followed and shot them in retired forests, where their food was insects.

DACELO ERYTHRORHYNCHA.

Halcyon erythrorhyncha. Gould. Zool. of the Beagle, pt. 3, p. 41.

Collection Exp. Exp.

We found these birds abundantly distributed through the dry valleys of the Island of St. Jago, one of the Cape de Verdes, on the 6th of October. Their stomachs, at that season, contained, in addition to various insects, some caterpillars. The females are marked like the males, but are not so brilliantly coloured. A young male which we obtained, has the crown cinereous; the brows and collar somewhat tawny; chin white; breast-feathers tipped with ash; abdomen pale chestnut; legs yellowish; toes black: bill black, tipped with yellow, and abruptly *hooked;* shorter than that of the adult birds; the hook disappears before the bill attains its bright red colour when maturely grown.

TROGONIDÆ.

HARPACTES RODIOSTERNUS.—(Nob.)

Plate XLI. Fig. 3.

Collection Exp. Exp.

H. capite guttureque saturatè vinaceis : dorso, scapularibus uropygioque cinnamomeis : pectore pallidè rosaceo : abdomine et crisso rubro nitidis : alis nigris ; primariis exteriùs albo marginatis, scapis nigris ; secundariis tegminibusque transversim lineis frequentibus albis connotatis : caudâ nigrâ : intermediis binis plumis cinnamomeis, apice nigris ; extimis vero ternis utrinque apice atque margine externo albis : rostro flavo nitente, ad basin viridi : regione ophthalmicâ lagulinâ : faucibus flavis : pedibus olivaceis, plantis unguibusque flavis : iride brunneâ.

Head and throat dark vinaceous brown: back, scapulars, and rump cinnamon brown: breast pale rose-colour: abdomen and under tail-coverts bright red: wings black, the primaries outwardly edged with white, shafts black; secondaries and coverts transversely crossed with numerous white lines: tail black, the two centre feathers cinnamon brown tipped with black; three outer feathers each side tipped and margined outwardly with white: bill bright yellow, the base green; ophthalmic region ultramarine blue; inside of the mouth yellow: feet olive-green, the palms and claws yellow: irides brown.

Total length, $13\frac{1}{2}$ inches: wings, from the carpal joints, $5\frac{9}{10}$ inches: tail, $6\frac{2}{10}$ inches: tarsi, $\frac{1}{2}$ inch: middle toe, including the claw, 1 inch;

claw $\frac{4}{10}$ inch; outer hind toe, $\frac{7}{20}$ inch; claw, $\frac{3}{20}$ inch; inner hind toe, $\frac{6}{10}$ inch; claw $\frac{2}{10}$ inch; bill, $\frac{8}{10}$ inch; to the angle of the mouth, $1\frac{1}{20}$ inch. Male.

Our specimen was killed on the 31st of January, near Sambuangu, on the Island of Mindanao. It sits crosswise on the small branches of trees and bushes, and is very active in taking insects on the wing. The clear sunlight at three o'clock in the afternoon did not appear to incommode it, or others observed at the same time.

CAPRIMULGIDÆ.

CAPRIMULGUS NUTTALLII.

Nuttall's Whip-poor-will. *Caprimulgus Nuttallii.* Audubon's Birds of America, vol. vii. p. 350, pl. 495.

Collection Exp. Exp.

Although but a single specimen of this species was obtained in Oregon, we have reason to suppose that it is not uncommon there during the summer months, and that they migrate to California and Mexico during the winter.

We did not meet with the "Whip-poor-will," *Caprimulgus vociferus* (Wilson's Am. Orn.), or the "Night Hawk," *Chordeiles Virginianus* (Briss.), during our sojourn in that country.

CAPRIMULGUS ÆQUICAUDA.—(Nob.)

Plate XLVII. Fig. 1.

Collection Exp. Exp.

C. capite dorsoque ex griseo fuscescenti-brunneo rufescentique variis: pectore abdomineque fulvis, notulis fusco-brunneis rufescentibusque trajectis punctulatisque: maculâ gulari albidâ: alis saturatè brunneis; remigibus primis quatuor lineâ albâ obliquè fasciatis, rufo marginatis: secundariis rufo irregulariter vittatis; tectricibus maculâ terminali pallidè flavâ præditis, saturatiori brunneo marginatis: caudâ æquatâ quadratâve; plumis quatuor centralibus griseis, quas fasciæ septem fusco-brunneæ undulatim connotant; plumis reliquis saturatè brunneis, quarum radii interni, ad apicem albi, vittis tribus

fulvis juxta corpus sunt præditi; radios verò externos fasciis octo decemve rufescentibus, intervallis paribus, notantibus: tarsis ad digitos usque plumis contectis: iride brunneâ.

Head and back mottled with gray, dark brown, and rufous: breast and abdomen tawny, crossed and spotted with small marks of dark brown, and pale rufous: gular spot white: wings dark brown, the first four quills crossed by an oblique white line, which is edged with rufous; secondaries with irregular bars of dark rufous; coverts with a terminal spot of pale tawny margined with dark brown: tail even, or "square," four centre feathers gray, crossed by seven irregular bars of dark brown, the rest dark brown, the inner webs tipped with white and crossed by three bars of tawny near the body; outer web with eight or ten narrow, equidistant bars of pale rufous: tarsi covered with feathers reaching to the toes: irides brown.

Total length, $8\frac{3}{10}$ inches: wing, from the carpal joint, $5\frac{3}{10}$ inches: tail, 4 inches: tarsi, $1\frac{3}{20}$ inch: middle toe, including the nail, $\frac{17}{20}$ inch; nail, $\frac{3}{20}$ inch: hind toe, $\frac{2}{10}$ inch; nail, $\frac{1}{20}$ inch: bill, $\frac{4}{10}$ inch; to the angle of the mouth, $1\frac{2}{10}$ inch.

Found in considerable numbers near Callao, Peru, in the month of July; it was always on the ground during the day, and never uttered any sound when flushed.

CAPRIMULGUS CONTERMINUS.—(Nob.)

Plate XLVII. Fig. 2.

Collection Exp. Exp.

C. capite, dorso tectricibusque alarum minoribus rufescentibus, griseo intermixtis, fasciatis punctulatimque brunneo irroratis: scapularibus medio nigris: remigum quatuor primis fusco-brunneis, medio fasciâ obliquâ notatis: secundariis fasciis quinis senisve guttularum rufescentium intersectis: caudâ nonnihil rotundatâ; plumis intermediali-

bus binis griseis, fasciis octo indistinctis interruptisque saturatè brunneis præditis; reliquis brunneis, vittis frequentibus interruptis guttisque rufescentibus insignitis; tegminibus subjacentibus fulvis: maculâ gulari rufescente: pectore atque abdomine rufescente-griseis, lineolis numerosis fusco-brunneis intersectis: tibiis rubido-brunneis, digitis furvis: vibrissis rictalibus fortibus, atro nitentibus: iride fusco-brunneâ.

Head, back, and smaller wing-coverts rufous mixed with gray, barred and minutely spotted with dark brown: scapulars with a black centre: first four quills dark brown, crossed in the middle by an oblique rufous bar; secondaries crossed by five or six bars of rufous spots: tail slightly rounded; the two centre feathers gray, crossed by eight indistinct and broken bars of dark brown; the rest brown, crossed by numerous broken bars and spots of rufous; under coverts tawny: gular spot rufous: breast and abdomen rufous gray, crossed by numerous small lines of dark brown: legs reddish, the toes dusky: rictal bristles strong and glossy black: irides dark brown.

Total length, $10\frac{3}{10}$ inches; wing, from the carpal joint, $6\frac{9}{10}$ inches: tail, $4\frac{6}{10}$ inches: tarsi, $\frac{11}{20}$ inch; middle toe, including the nail, 1 inch; nail, $\frac{1}{4}$ inch: hind toe, $\frac{3}{10}$ inch; nail, $\frac{1}{10}$ inch; bill, $\frac{3}{10}$ inch; to the angle of the mouth, $1\frac{3}{10}$ inch: second quill longest, third a trifle shorter.

Only one specimen was obtained, in the month of May, near Valparaiso, in Chili. It was sitting on the ground when discovered, and uttered a cluck when flushed.

CAPRIMULGUS BIMACULATUS.—(Nob.)

Plate XLVIII. Fig. 1.

Collection Exp. Exp.

C. vertice occipiteque cineraceis, plumis medio notâ cuspidatâ nigrâ præditis: auricularibus mentoque rufis, lineis tenuibus fusco-brunneis intersectis: lineâ albâ circa marginem oris inferiorem: gutture albo,

cujus pars inferior nigro marginata est: pectore abdomineque fulvo-griseis, minutim fusco-brunneo guttatis: ani plumis crissique pallidissimè fulvis, lineolis brunneis, quæ ad crissum majori intervallo a se distant, conspersis: dorso obscurè fulvescente-griseo: scapularibus fulvo-griseis; extimis fasciâ obliquâ notatis; centralibus in medio nigris, et diluto-flavescente latè marginatis: alis ex fulvo griseoque variegatis; tectricibus exterioribus in medio saturatè brunneis, ad apicem albis; tectricibus interioribus fulvis, fusco-brunneo vittatis: remigibus nigris, versus apicem in brunneum transeuntibus; albo in medio fasciatis, fasciâ pogonium externum primæ non notante; secundâ longissimâ, huic tertiâ ferè æquali; quartâ primâque æqualibus; secundæ tertiæque radiis profundè in medio excisis: secundariis guttis rufi coloris sparsim irroratis: caudâ rotundatâ nigrescenti-brunneâ; centralibus plumis fulvo-griseo variegatis, lateralibus guttis rufescentibus tessellatis; binis utrinque plumis ad apicem secundùm tertiam partem longitudinis suæ albis: plumis fulvis brunneo decussatis tarsos obtegentibus: digitis fuscescentibus.

Crown and occiput cinereous gray, the feathers having a central, black, pointed mark down the middle: auriculars and chin rufous, crossed by fine lines of dark brown; a white line along the lower edge of the mouth: throat white, margined with black below: breast and belly tawny gray, finely spotted with dark brown: vent and under tail-coverts very pale tawny, crossed by small brown lines, which are widest separated on the under tail-coverts: back dark tawny gray; scapulars tawny gray, the outer feathers having an oblique black band, and those of the middle, black centres, and broad outer margins of pale buff: wings mottled tawny gray, the upper coverts dark brown in the middle and tipped with white; the under coverts tawny, with dark brown bars; quills black, running into brown towards the tips; the second longest, third nearly equal to it, fourth and first even; a white bar crosses them in the middle, excepting the outer web of the first; second and third deeply excised in the middle of the outer web: secondaries crossed by scattered rufous spots: tail rounded, dark brown; the middle feathers mottled with dark tawny gray; the outer ones slightly barred with rufous spots; two on each side are white one-third of their length from the tip: tarsi covered with tawny feathers, barred with brown: toes dusky.

Total length, $11\frac{6}{10}$ inches; wing, from the carpal joint, $8\frac{3}{10}$ inches; tail, $5\frac{9}{10}$ inches; tarsi, $\frac{6}{10}$ inch; middle toe, including the nail, $\frac{9}{10}$ inch; nail, $\frac{2}{10}$ inch; bill, $\frac{3}{10}$ inch; to the angle of the mouth, $1\frac{1}{10}$ inch.

Inhabits the Malay Peninsula; the specimen was obtained at Singapore.

CHORDEILES PERUVIANUS.—(Nob.)

Plate XLVIII. Fig. 2.

Collection Exp. Exp.

C. capite, dorso, scapularibus et intermediis binis rectricibus pallide griseis, fulvo intermixtis; maculâ sagittali gulæ albâ: gulæ vero inferiori parte fulvâ, fuscescenti variegatâ: pectore griseo, tenuiter nigro maculato: abdomine, ano crissoque fulvescentibus fuscescenti fasciatis: alis fuscescenti-atris, fasciâ albâ remiges quatuor primas in medio notante; remige secundâ paulò longiore quàm prima; ipsa autem prima longior est quàm tertia: caudâ indentatâ, fuscescente; juxta apicem vittâ albâ illam notante, intermediis autem plumis binis non vittatis; infra fasciam versùs corpus fasciis pluribus griseis; inferiori parte caudæ fasciis sex planè albis instructâ, quarum extrema maximè est conspicua.

Head, back, scapulars, and two middle tail-feathers, light gray, mixed with tawny: sagittal spot on the upper part of the throat white, beneath it tawny, mottled with dusky: breast gray, finely mottled: belly, vent, and under tail-coverts, pale tawny, with dusky bars: wings dusky black, the first four quills crossed at the middle by a white bar; second quill rather longer than the first, the third is shorter; tail notched, dusky, a white band crossing all except the two middle feathers, near the tip; inside of this band are several gray mottled bars; beneath, six decided white bars, the end one being most conspicuous.

Total length, $8\frac{1}{10}$ inches; wing, from the carpal joint, $6\frac{9}{10}$ inches; tail, middle feathers, $3\frac{4}{10}$ inches, outer feathers, 4 inches; tarsi, $\frac{1}{2}$ inch; middle toe, including the claw, $\frac{7}{10}$ inch; claw, $\frac{2}{10}$ inch; pecti-

nation very conspicuous; hind toe, $\frac{1}{4}$ inch; claw, $\frac{1}{20}$ inch; bill, $\frac{2}{10}$ inch; to the angle of the mouth, $\frac{9}{10}$ inch.

This is the southern analogue of the North American Night-hawk.* It was found to be a common species near Callao, in Peru, during the month of July, and was seen resting on the ground only, never on fences or trees; it was not heard to utter any cry.

* Night-hawk. *Caprimulgus Americanus.* Wilson's Am. Orn., vol. v. p. 65. The Pisk. *Caprimulgus* (*Chordeiles*) *Virginianus.* Richardson's Fauna Boreali-Americana, vol. ii. p. 337. Night-hawk. *Chordeiles Virginianus.* Audubon, Birds of America, vol. i. p. 159, pl. 43.

HIRUNDINÆ.

HIRUNDO RUSTICA.—(L.)

Collection Exp. Exp.

On the 11th of October, in latitude 19° 54″ N., longitude 24° 13′ 30″ W., from Greenwich, a fine male specimen of this Swallow flew on board the U. S. Ship Peacock; and on the 20th of the same month, while still at sea, another was caught; this was in latitude 6° 50′ N., longitude 21° 38′ W.: they were much emaciated, and were reserved for specimens. Many others came to the ship and rested, caught a few straggling flies which had followed us from the shore, and being in better condition than the others, were suffered to depart on their journey.

HIRUNDO CYANOLEUCA.

Hirundo cyanoleuca. Vieill. Gould. Darwin's Zoology of the Voyage of H. M. Ship Beagle, pt. 3d, p. 41.

Collection Exp. Exp.

We found this species very common, in the month of July, about Lima and Callao, in Peru. They were quite familiar, entering the court-yards of the houses, and coursing within a few feet of pedestrians.

HIRUNDO RUFOCOLLARIS.—(Nob.)

PLATE XLIX. FIG. 1.

Collection Exp. Exp.

H. vertice dorsoque nigris cæruleo irescentibus: alis caudâque sepiacis, longitudine æqualibus, alis demissis: caudâ ferè quadratâ, centralibus binis, necnon et extimis binis plumis æqualibus: collari nuchali, uropygio, pectoris fasciâ hypochondriisque rufescenti-brunneis: gutture ventreque albis: crisso fuscescenti, margine albo: rostro nigro: pedibus fuscescentibus: iride brunneâ.

Crown and back black, with blue reflections: wings and tail sepia-brown; even in length when closed: tail nearly square, the two middle and two outer feathers being equal in length: nuchal collar, rump, band across the breast, and flanks, rufous-brown; throat and abdomen white: under tail-coverts dusky, edged with white: bill black: feet dusky: irides brown.

Total length, $5\frac{1}{8}$ inches; extent of the wings, $11\frac{1}{10}$ inches; wing, from the carpal joint, $4\frac{2}{10}$ inches; tail, $1\frac{6}{10}$ inch; middle and outer feathers, $1\frac{8}{10}$ inch; tarsi, $\frac{7}{20}$ inch; middle toe, including the claw, $\frac{11}{20}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{4}{10}$ inch; claw, $\frac{3}{20}$ inch; bill, $\frac{2}{10}$ inch; to the angle of the mouth, $\frac{11}{20}$ inch. Male.

Killed near Callao, Peru, on the 12th of July. But few of them were seen.

MACROPTERYX SPODIOPYGIUS.—(Nob.)

PLATE XLIX. FIG. 2.

Collection Exp. Exp.

M. capite, alis caudâque nigris: dorso fuliginoso: uropygio cinereo: gutture, pectore, abdomine alisque subtùs pallidè fuliginosis: rostro præter morem exiguo, rictu autem magno: caudâ subfurcatâ, plumis valdè latis et apice rotundatis: iride fusco-brunneâ: rostro nigro: tarsis sordidè carneis: remige secundâ longissimâ, aliquantulò longiore quàm prima.

Head, wings, and tail, black: back fuliginous: rump cinereous: throat, breast, abdomen, and under portion of the wings, pale fuliginous: the bill unusually small, but the mouth large: tail slightly forked, the feathers very broad, and rounded at the tips: irides dark brown: bill black: tarsi dusky flesh-colour: second quill longest, the first a trifle shorter.

Total length, $4\frac{1}{2}$ inches; extent of the wings, $10\frac{7}{8}$ inches; wing, from the carpal joint, $4\frac{8}{10}$ inches; tail, $2\frac{2}{10}$ inches; tarsi, $\frac{3}{10}$ inch; middle toe, including the claw, $\frac{3}{10}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{1}{4}$ inch; claw, $\frac{3}{20}$ inch; bill, $\frac{1}{8}$ inch; to the corner of the mouth, $\frac{9}{20}$ inch.

When the Expedition visited the Island of Upolu, in the month of November, 1839, Mr. Cunningham, acting British Vice-Consul, informed us that he had discovered, in a cave, on the south side of that island, some curious Swallows, which had never been seen elsewhere; that they were entirely subterranean, hatched their eggs, fed and raised their young, in the dark recesses of the earth, &c. We had previously seen both fish and reptiles taken in such situations, including the famous Axolotl, of Mexico, but were not prepared to hear of *subterranean birds.*

A journey was therefore made to the cave described by Mr. Cunningham. It rained the whole time, which was four days, occupied in going and returning across the mountains; but having become ac-

customed to marching in mud and water, we enjoyed the tramp, and picked up, besides Swallows, many interesting objects, which we saw in numbers every day that we stayed on the island. On reaching the cave, we found that it was one which was formerly supposed to be the residence of one of the native gods, "Moso." Our Samoan companions pointed out the place, but declined entering, and we found that a wall had been built across the entrance, leaving but a narrow aperture through which the passage was given into utter darkness; but being prepared with matches, candles, and a lantern, we soon were on our way through a regularly formed volcanic tunnel, or passage, which was once an outlet by which lava in its molten state found its way from the mountains to the sea.

A sound like the rattling of small hard pebbles was heard, and soon traced to numerous Swallows, which had been disturbed by our lights; many others were discovered sitting quietly on their nests, placed on slight ridges of the lava.

The nests were composed of moss, held together with glue incorporated with the moss in large quantities; like the walls of the cave, they were dripping with moisture; each contained but *one* egg, or young bird, and incubation did not appear to be confined to any particular season. Some were just building, while the young of others had quitted the nest, and were just beginning to fly. Old nests were repaired with new moss, which made it appear that they used the same more than once. Some of the old birds were so unsuspicious that they allowed us to lift them off their egg with our hands, and they immediately returned when we were satisfied that they had but one under them.

The nests are nearly round, three inches in diameter, and about one inch and a half high. The eggs are pure white, one end nearly as small as the other; three-quarters of an inch long, and half an inch in diameter.

Notwithstanding these Swallows are known to fly through long subterranean passages in total darkness, they may daily be seen abroad, even in clear sunlight, collecting food for themselves and their young; so that it is probable there will be found on careful examination, some anatomical structure which enables them to alter the form of their eyes, and see both in the dark and in the light. Such minute examinations require both time and patience, which we then had not in our control.

The two sexes are alike in plumage, which the young also wear

from the first moult. We had frequent opportunities of seeing them at Upolu, and at Tutuila, of the Samoan Islands, and several of the Feejees. They resemble the Swallow found at the Island of Vanikoro, (*Hirundo Vanikorensis*,)* but may be distinguished by the ash-coloured rump.

MACROPTERYX LEUCOPHÆUS.—(Nob.)

Plate XLIX. Fig. 3.

Collection Exp. Exp.

M. pallidè fuliginosus, subtùs pallidior: summo capite, alis caudâque nigricantibus: radiis tegminum majorum alarum undulatis: rostro minutissimo et gracillimo: capistro distento-rotundo: oculis magnis: iride fusco-brunneâ: pedibus fuscescenti-rubris: caudâ subfurcatâ.

Pale soot-colour, beneath lighter: crown, wings, and tail, darkest: webs of the greater wing-coverts undulated: bill very minute, and delicate; forehead full, round: eyes large: irides dark brown: feet dusky red: tail slightly forked.

Total length, $5\frac{1}{10}$ inches; wing, from the carpal joint, $5\frac{3}{10}$ inches; tail, $2\frac{4}{10}$ inches; tarsi, $\frac{7}{20}$ inch; middle toe, including the claw, $\frac{4}{10}$ inch; claw, $\frac{3}{20}$ inch; hind toe, $\frac{1}{4}$ inch; claw, $\frac{1}{10}$ inch; bill, $\frac{1}{10}$ inch; to the corner of the mouth, $\frac{9}{20}$ inch.

This species was obtained at the Island of Tahiti, where they are not uncommon. Their flight and appearance towards evening, at which time they appear to be most active, is like the Chimney Swallow of North America (*Chætura pelasgia*, Stev.), but the large and full tail of our bird, and its small bill and feet, destroy further analogy. It is probable, as there are no chimneys on the island, that it breeds in caves, like the last described species, to which it bears a family likeness; but we were not so fortunate as to discover their nests.

* Voyage de découvertes de L'Astrolabe, exécuté par ordre du Roi. Pendant les Années, 1827, 28, 29. Sous le Commandement de M. J. Dumont D'Urville. Zoologie, par MM. Quoy et Gaimard, tom. i. p. 206, pl. 12, fig. 3.

RASORES.

PAVONIDÆ.

GALLUS BANKIVA.

Gallus Bankiva. Temm. Hist. Nat. Gen. des Pigeons et des Gallinacés, tom. ii. p. 87.
Gallus Bankiva. Horsf. Lin. Trans., vol. xiii. p. 185.
Gallus Bankiva. Raffles. Lin. Trans., vol. xiii. p. 319.
Javan Cock. Latham. Gen. Hist. of Birds, vol. viii. p. 166.

Collection Exp. Exp.

Fowls are found wild in the unfrequented parts of the Island of Tahiti, which appear to be specifically the same with those held in a state of domestication by the natives at the time of their discovery by Europeans, and continued to the present day. They are less subject to variations of plumage than the domesticated fowls, and are said to retain a wild spirit which is not easily subdued. The young hatched from the eggs of wild hens, take to the woods as soon as they are old enough to leave their foster-mothers; and should a domestic fowl wander a sufficient distance from the dwelling of its master, to be heard or seen by the wild ones, a battle ensues which is almost always fatal to it. The Tahitians often take advantage of this belligerent propensity to obtain a meal of tough poultry, by tying a cord six or eight feet long to the leg of a dunghill bully, and carrying him to the mountains at early dawn; the tame cock crows, and is answered by the wild one, and from notes of defiance they are led to join in combat. The Tahitian conceals himself, until by the noise of wings, he feels assured the strife has commenced, when he comes to the rescue, and generally finds the cord has bound the two combatants together. Any person who has seen a cock-fight, will readily understand how

this has taken place. The wild fowl instantly loses his head, and the tame one renews the conflict with the next wild one within hearing of his notes of defiance.

This variety may be indigenous to the group of Society Islands, as they differ in some respects from those of the Indian Ocean, but we cannot but believe them to be specifically the same, and that they were introduced by the Malayan forefathers of the present Tahitians; they give a collateral proof that such was the origin of the human race in Polynesia.

On comparison with specimens from Malacca, it is found that the Tahitian wild fowls are a shade lighter in colour, somewhat larger, with broader pendant feathers in the tail, and larger comb, which is entire on the hind part; in this respect presenting the most marked difference from the Malayan wild fowls, which have theirs notched on the hind edge.

WILD COCK FROM TAHITI. WILD COCK FROM MALACCA.

ALECTURA LATHAMI.

New Holland Vulture. Latham. Gen. Hist. of Birds, vol. i. p. 32.
Genus *Alectura*. Latham. Gen. Hist. of Birds, vol. x. p. 455.
Genus *Telegallus*. Lesson. Voy. de la Coquille, Zool., tom. i. pt. 2, p. 715.
Alectura Lathami. Gray. Zool. Miscel., No. 1, p. 3.
Native Turkey. Colonists N. S. Wales.

Collection Exp. Exp.

We did not meet with this bird in its native state, although we hunted diligently in some parts of New South Wales inhabited by them. In the district of Illawarra, many curious accounts were given of its most singular habits; one of which is, that many females lay their eggs together; that they do not sit on them, but collect weeds and place a layer of them over the eggs, then more eggs, and so alternate layers, until a conical heap, several feet in height, has been formed; the whole is then left to ferment by the heat of the sun, being guarded by males only. This account is in a measure corroborated by the habits of a male "Native Turkey," which was kept some time, and partially domesticated, by Alexander MacLeay, Esq., near Sidney. It collected and formed a heap of vegetable matter every season, which it guarded with great care, although containing no eggs.

The Alligators (*Crocodilus lucius*, Cuv.), in East Florida, deposit their eggs in conical heaps formed by alternate layers of rushes, or any convenient vegetable matter, and guard them until the young are hatched by fermentation; precisely as the Alectura is described to do. A curious analogy in two races so widely separated as birds and reptiles.

Mr. Darwin, in the Zoology of the Voyage of H. M. S. Beagle, part 3d, p. 122, in a note mentions this most interesting discovery by Mr. Gould, who was in Australia at the time of our visit, but we were not so fortunate as to meet with him. Our few and imperfect remarks would not be recorded now, knowing his superior opportunities, and

experience, were it not that they may aid in the corroboration of the accounts of a habit so remarkable as that attributed to the Alectura or Native Turkey, of Australia.

COTURNIX MAJOR.

Common Quail. *Perdix coturnix.* Latham. Gen. Hist. of Birds, vol. viii. p. 212.
Coturnix major. Brisson, vol. i. p. 251.

Collection Exp. Exp.

Quails were found in great abundance at the Island of St. Jago, one of the Cape de Verde Islands; they do not, on examination, present any characteristics by which they can be separated from those found in Europe, but from their being very fat on the 6th of October, and on dissection presenting satisfactory evidence that it was the commencement of the breeding season with them, we cannot suppose them individually the same which have migrated south. Their retreats among high strong grass, were betrayed by the often-repeated cry, pet-wet-wet, which can be heard about one hundred yards; on approaching them, they flush within about twenty feet, flying generally in a straight line, and are consequently easily shot.

PERDIX CALIFORNICA.

Californian Quail. *Perdix Californica.* Latham, Gen. Hist. of Birds, vol. viii. p. 328.
Californian Partridge. *Ortix Californica.* Audubon, Birds of America, vol. v. p. 67.

Collection Exp. Exp.

This beautiful species was first observed by the Expedition in the mountainous regions of Southern Oregon, near the forty-third degree of north latitude, which may be considered about their furthest range

north; there the flocks were small, but as we proceeded south, they continued to increase, and in California great numbers were seen daily. Several flocks, or coveys, unite in the autumn months; they delight in bushy flats, near the banks of streams. During our march through the Indian countries north of California, we frequently observed them collect at night, to roost on trees. At such times their call-note was plaintive, and had a slight resemblance to the words *cut-cut-cut me too.* They are hardy; a few were kept alive by the members of the Expedition, and brought to the City of Washington, by a route equal to the circumference of the earth; they crossed the Equator twice, and have since produced a brood of young, which unfortunately all died.

The young birds are mottled with pale tawny and brown; the head is tawny, with a dark brown stripe reaching from the crown down the back of the neck to the shoulders; each of the wing-coverts have a light-coloured tip, and a stripe down the middle.

ORTIX PLUMIFERA.

Plumed Partridge. *Ortix plumifera.* Gould. Audubon's Birds of America, vol. v. p. 69.
Ortix picta. Douglass. Lin. Trans., vol. xvi. p. 143.

Collection Exp. Exp.

Specimens of this Partridge were obtained by Captains Lewis and Clarke, on their journey across the Continent to the mouth of the Columbia River, in 1806. Captain Lewis had a drawing made with the intention, it is supposed, of publishing it with his journal; but as he died without accomplishing that object, the credit of this, with many other discoveries of that expedition, has been lost.

The Columbia River appears to be the northern limit of this species; we saw them on the Willamette River, but although in large flocks or coveys, they were not common. South of the Umpqua River we saw them in greater numbers. In California they are in a great measure replaced by the California Partridge just noticed.

TETRAO OBSCURUS.

Dusky Grouse. *Tetrao obscurus.* Say. Long's Expedition to the Rocky Mountains, vol. ii. p. 202.
Dusky Grouse. Bonaparte's Am. Orn., vol. iii. pl. 18.
Dusky Grouse. Audubon's Birds of America, vol. v. p. 89.

Collection Exp. Exp.

Common in Oregon wherever coniferous evergreens occur, from the Rocky Mountains to the Coast, and from Puget's Sound to the northern confines of California; but in this region they are not abundant south of the Umpqua River.

TETRAO UMBELLUS.

Ruffed Grouse. *Tetrao umbellus,* L. Wilson's Am. Orn., vol. vi. p. 46.
Ruffed Grouse. Richardson, Fauna Boreali-Am., vol. ii. p. 342.
Ruffed Grouse. Audubon's Birds of America, vol. v. p. 73.

Observed in abundance near the Columbia River, but not south of the Elk Mountains, lying north of the Umpqua River. They are subject to the same variations of plumage on the coast of the Pacific Ocean, which have been observed on the Atlantic coast; some have the rump and tail gray, while others have those parts of a rich ferruginous brown.

TETRAO UROPHASIANUS.

Cock of the Plains. Lewis and Clarke.
Tetrao urophasianus. Bon., Am. Orn., vol. iii. pl. 21.
Tetrao urophasianus. Audubon, Birds of America, vol. v. p. 106.
Tetrao urophasianus. Richardson, Fauna Boreali-Americana, vol. ii. p. 358.

Collection Exp. Exp.

The plains on the Wallawalla River appear to be the western limit of this species; and although we passed over much country south, which seemed to us would be favourable to them, we did not see a "Cock of the Plains" on our way into California. Our specimens were obtained at Wallawalla.

Several other species of Grouse were seen, and killed by the different parties of the Expedition while in Oregon, but as no specimens were preserved, they cannot now be determined.

COLUMBIDÆ.

COLUMBA ARAUCANA.

Columba Araucana. Lesson. Voy. autour du Monde, Zool., tom. i. pt. 2, p. 706.

Collection Exp. Exp.

This Pigeon appears in the southern hemisphere, to be the prototype of *Columba fasciata* in the northern; their plumage, size, and habits are almost alike: persons seeing each in their native regions, would, without a comparison of specimens, side by side, be inclined to suppose them the same. The country also of each, appears to be within analogous parallels of latitude north and south of the Equator. In Chili it is quite common.

COLUMBA FASCIATA.

Band-tailed Pigeon. Bonaparte. Am. Orn., vol. i. p. 77.
Columba fasciata. Say. Long's Exped. to the Rocky Mountains.
Band-tailed Dove. *Columba fasciata.* Audubon, Birds of America, vol. iv. p. 312.

Collection Exp. Exp.

It is very common in Oregon, but was not seen by our party in California, although we have reason to believe it may be found in favourable situations. It is now well ascertained to be limited by the eastern slope of the Rocky Mountains. About the mouth of the Columbia River it is found all the year round.

COLUMBA VITIENSIS.

Colombe Viti. *Columba Vitiensis.* Quoy et Gaimard, Voy. de L'Astrolabe, Zool., tom. i. p. 246, pl. 28.

Collection Exp. Exp.

Not uncommon at the Feejee Islands. We observed them during the month of June in parties of three and four, and a few solitary; from which we were led to the conclusion, that it was about the last of the breeding season; the parties being generally composed of two old and two young birds. The figure given in the Zoology of the Voyage of the Astrolabe, appears to have been taken from a young male. A female measured, when killed, fourteen and a half inches long, and twenty-four and three quarter inches across the wings: irides yellowish-brown: eyelids and feet dusky lake-red: bill black.

COLUMBA CASTANEICEPS.—(Nob.)

Plate L.

Collection Exp. Exp.

C. toto corpore, alis caudâque cyaneo-cinereis; partibus subjacentibus pallidissimis: colli dorsique plumis ad apicem aureo-viridibus, et purpureo irescentibus; pectoris plumis ad apicem nonnisi purpureis: alis caudâque nigris: remigibus fuscescentibus; e primariis tertiâ longissimâ; rhachibus fuliginosis: caudâ æquatâ, duodecim constante plumis, apicibus rotundatis: capite castaneo: gutture, genis, auricularibus inclusis, albis: iride fusco-brunneâ: palpebris, rostro pedibusque sanguineis.

Entire body, wings, and tail, dark blue ash-colour, lightest beneath: the feathers of the neck and back tipped with a golden green and purple lustre; those on the breast with purple only: wings and tail

black; quills dusky; third primary longest; shafts sooty-black: tail even, consisting of twelve feathers; broad, and rounded at their ends: head chestnut-colour; throat and cheeks, including the auriculars, white: irides dark brown: eyelids, bill, and feet, lake-red.

Total length, $16\frac{1}{4}$ inches; extent of the wings, $26\frac{1}{8}$ inches; tail, 6 inches; bill, $\frac{6}{10}$ inch; tarsi, 1 inch, naked; middle toe, including the nail, $1\frac{1}{2}$ inch; nail, $\frac{4}{10}$ inch. Male.

The female is rather smaller; has less brilliant metallic reflections, and the head more inclining to a sepia-brown colour.

This species bears a close resemblance to *C. Vitiensis;* it is, however, larger, of a different colour, and besides the chestnut-coloured head, may always be distinguished by the lighter colour of the bill and feet. They are strictly arboreal, and were principally found in the dense forests which cover the mountains of Upolu, one of the Samoan Islands.

COLUMBA MERIDIONALIS.

Columba meridionalis. King, Zool. Journal, vol. iv. p. 92.

Collection Exp. Exp.

Found in small flocks feeding on the sandhills near the mouth of the Rio Negro, Patagonia, in January. The notes and voice of the male, are almost precisely like those of the Ring Dove (*Columba risoria*).

ECTOPISTES CAROLINENSIS.

Genus *Ectopistes.* Swainson. *Columba Carolinensis.* L.
Columba Carolinensis. Wilson, Am. Orn., vol. v. p. 91.
Ectopistes Carolinensis. Audubon, Birds of America, vol. v. p. 36.

Collection Exp. Exp.

Observed in Oregon, on the Columbia River, and at the Bay of San Francisco, in California; rare.

Genus PTILINOPUS.—(Swainson.)

Zool. Journal, vol. i. p. 473.

The birds of this genus are found on almost all the tropical islands of the Pacific, and Indian Oceans; also on the northern portions of Australia, but not in New Zealand or the Sandwich Islands. The species are so similar, that there is great difficulty in determining them; but having been careful to obtain numerous specimens, in various states of plumage, from each group of islands visited by the Expedition, it is hoped that the characteristics of each will be satisfactory to our readers.

PTILINOPUS CORALENSIS.—(Nob.)

PLATE LI.

Coral Island Dove.

Collection Exp. Exp.

P. verticis maculâ perpallidè rubeaceâ, rostri basin haud attingente: rostro flavo: iride rubrâ: tibiis rubris: capite, collo pectoreque cineraceis: plumis fasciâ viridescenti-flavâ propè apicem insignitis; pectoris plumis bifurcatis: dorso uropygioque viridibus, in olivaceum vergentibus: ano tectricibusque caudæ flavescentibus: abdomine virescenti-flavo: alis caudâque in luce directâ cupreo-nitentibus, aurescenti-viridi fasciatis: alis caudâque subtùs cinerascentibus: remigum scapis brunneis: rectricum scapis infrà albis, suprà nigris: caudâ æquatâ, radiis interioribus propè apicem nigricante fasciâ notatis: tertiariis flavo marginatis; primariis secundariisque perangustè albo marginatis: tibiarum plumis cineraceis.

Vertex having a very pale rubiaceous spot, which does not reach to the base of the bill: bill yellow: irides red: legs red: head, neck, and breast, ashy; the feathers having a very pale greenish-yellow band near their tips, those on the breast bifurcate: back and rump green, inclining to olive: vent and tail-coverts pale yellow; belly greenish-yellow: wings and tail, when viewed in a positive light, bright copper-colour, barred with golden-green; under parts of the wings and tail cinereous; quill-shafts brown: tail-shafts white beneath, and black on the upper surface; tail even, the inner webs having a dark bar near the tip: tertiary feathers edged with yellow; primaries and secondaries having a very narrow margin of white: feathers on the legs cinereous.

Total length, $9\frac{1}{2}$ inches; tail, $3\frac{1}{10}$ inches; extent of wings, 17 inches; bill, $\frac{1}{2}$ inch; tarsi, 1 inch. Male.

The general aspect is less rotund than the next, and the colour paler; besides the spot on the crown not reaching to the bill; it is somewhat deeper in colour.

This beautiful Dove was the first bird which attracted our attention at the Island of Carlshoff, by its plaintive hoot-hoot-hoot, uttered in rapid succession. The woodland being of very limited extent, we thought it would be an easy matter to find them, but were mistaken; for although the Doves were not wild, their curiosity induced them to sit still on being approached, and their delicate plumage accorded so well with the beautiful green of the foliage, that it was very difficult to see them.

Specimens were subsequently obtained, during the month of September, on most of the low coral islets of the Paumotu Group, but nowhere else; most of them are males. Their retreats are always in the most wooded, and secluded places.

PTILINOPUS FURCATUS.—(Nob.)

Plate LII.

Tahitian Dove.

Collection Exp. Exp.

P. formâ corporis generali rotundatâ: capite, collo pectoreque cinerascentibus, viridi imbutis: plumarum basi plumbeâ; pectoris autem plumis bifurcatis: e rostro ad verticem usque maculâ purpurascente: iride fusco-aurantiâ: pedibus fuscescenti-purpureis: dorso, uropygio alarumque tegminibus æneo-viridibus: alis cæruleis, viridi irescentibus, subtùs plumbeis: remige primâ cæteris breviore $\frac{6}{10}$ unciæ, et secundùm totam longitudinem ferè æquali, sive gradatim versùs apicem angustatâ; scapis nigris: secundariis lutescenti marginatis: ventre olivaceo: ano atque crisso sulphureis: caudâ cærulescente-viridi, aureo-irescente; singulis plumis juxta apicem maculâ cineraceâ instructis; quæ macula in quibusdam exemplaribus fasciam conspicuam efficicit: caudâ subtùs plumbeâ, fasciâ apicali cinerascente notatâ.

General form rounded: head, neck, and breast, cinereous, tinged with green, the bases of the feathers lead-colour; the tips of those on the breast bifurcate; a pale purple spot reaches from the bill to the vertex: irides dark orange: feet dusky purple: back, rump, and wing-coverts, bronze-green; wings blue, with green reflections; plumbeous beneath; the first quill six-tenths of an inch shorter than the others, and almost even throughout its length, or regularly narrowing towards the tip; shafts black; secondaries edged with pale yellow: belly olive-green: vent and under tail-coverts sulphur-yellow: tail blue-green, with golden reflections, a cinereous spot in each feather near the tip (in some specimens it forms a distinct cinereous band); under parts of the tail plumbeous, with a cinereous terminal band.

Total length, $9\frac{1}{2}$ inches; tail, $3\frac{4}{10}$ inches; bill, $\frac{4}{10}$ inch; tarsi, 1 inch; extent of the wings, $16\frac{3}{4}$ inches. Male, killed in September.

The females vary but little from the males; they are less brilliant in plumage, and have the same frontal spot, and the cinereous band on the tail.

They inhabit the Island of Tahiti. The voice of this species is a simple coo-coo-coo, uttered slowly, at regular intervals, and is much softer than that of the Coral Island Dove; it is not so sprightly in its movements, and the forked tail immediately distinguishes it from all others.

They delight in sitting on some dead branch in the shady recesses of the woods, most commonly one overhanging a path in moist ground; in such places you may hear its melancholy coo-coo-coo, and find it as we have described.

PTILINOPUS FASCIATUS.—(Nob.)

Plate LIII.

Samoan Dove.
Manu-tagi of the Samoans.

Collection Exp. Exp.

P. formâ generali rotundatâ: e vertice ad rostrum se extendente maculâ saturatè purpureâ, flavo angustè marginatâ: capite, collo pectoreque cineraceis (in juvenibus pallidè viridibus) fasciâ purpureâ notatis, quæ in flavum plumarum ani pallescit: ani plumis insuper basi nigris, apicibus albis: dorso uropygioque æneo-viridibus: alis caudâque supernè lætè aureo-viridibus: scapularibus secundariisque tenuiter flavo marginatis: alis caudâque subtùs plumbeis; remigum scapis nigris; primariarum primæ radiis ad apicem perangustis: caudæ rotundatæ plumis cœrulescente-viridibus, secundùm pogonium exterius aureo-irescentibus, secundùm interius nigris; apicibus supernè flavis, infernè flavescenti-albis; scapis nigris: plumis olivaceo-viridibus tarsos cooperientibus; pedibus sordidè sanguineis: rostro smaragdino: iride flavâ.

General form rounded; a rich purple spot, reaching from the crown to the bill, slightly margined with yellow: head, neck, and breast, cinereous, (in young birds pale green,) with a purple bar, fading into the yellow of the vent feathers, which are black at the base, and white near the tips: back and rump bronze-green; wings and tail, above, clear golden-green; the scapulars and secondaries slightly edged with yellow; under parts of the wings and tail plumbeous; quill-shafts black; the web of the first primary very narrow at the tip: tail rounded; feathers blue-green, with golden reflections on the outer web, black on the inner, and tipped with yellow above, yellowish-white beneath; shafts black: legs covered with olive-green feathers; feet dirty lake: bill emerald-green: irides yellow.

Total length, $9\frac{1}{4}$ inches; extent of the wings, $16\frac{1}{4}$ inches; wings, from the carpal joint, $5\frac{4}{10}$ inches; tail, $3\frac{1}{10}$ inches; tarsi, $\frac{9}{10}$ inch; bill, $\frac{1}{2}$ inch; to the angle of the mouth, $\frac{19}{20}$ inch. Male.

The females vary but little from the males, being generally smaller and not quite so brilliant in colour. The young birds are entirely green until the first moult.

The natives of the Samoan or Navigators' Group, enumerate three Doves, of this genus, inhabiting their islands; the most common is the *Manu-tagi*, or *Manu-tangi*, which, in English, means crying bird; it is described above. The next, called *Manu-rua*, is about the same size, but entirely green. Having had the misfortune to lose our specimens by the wreck of the U. S. Ship Peacock, we are unable to give a drawing, or further description of it. The third species is called *Manu-ma*, or shame bird, and is the one we have called La Perouse's Dove.

The *Manu-rua* is not uncommon at the Island of Upolu, where numbers were shot, but having the appearance of young *Manu-tagi* not in mature plumage, but few skins were prepared, and but little notice taken of the birds, until specific differences were pointed out by a *native*, our friend and hunting companion, Canielli, who assured us that they were green when in perfect plumage, and that both voice and mode of building their nests differed in each of the three species, which we had no opportunity of verifying, but believe to be true, as the Polynesians generally are close observers, and make very exact distinctions; having what few civilized nations have, a distinct name for every animal, and plant, found in their country.

The *Manu-tagi* is so called from its plaintive and distressful note; it is the strongest in its characteristics of the Polynesian Doves, and approaches nearest to the *P. purpuratus* of ornithologists, which are now supposed to be restricted to the northern parts of Australia, and islands of that vicinity.

We have seen several specimens from Moreton Bay, Australia, all of which were much higher coloured and stronger marked than any of our species, with the exception of the abdominal band, which is most strongly marked in the present one; the neck and breast of this is light yellowish-ash, while the Australians are blue-ash on the same parts, and have besides, a deep blue centre to the scapular and tertiary feathers of the wings, where the Samoans are green.

PTILINOPUS PEROUSII.—(Nob.)

PLATE LIV.

Manu-ma of the Samoans.

Collection Exp. Exp.

P. formâ generali præcedenti similis: fronte vittâque scapulari carmesinis: capite colloque albis flavo tinctis, plumis ad basin cinerascentibus, in medio fasciâ flavidâ notatis: pectoris plumis profundè dentatis, in medio fasciâ latâ saturatè sanguineâ transversim notatis: ex plumis pectoris indentatis deorsum ad ventrem maculâ aurantiâ protentâ: ani plumis albis apice flavescentibus: crisso sanguineo: scapularibus dorsoque virescenti-flavis: alis subtùs plumbeis cineraceisve; remigibus scilicet plumbeis, tegminibus verò minoribus diluto-cinereis, coloribus sensim coalescentibus; remigum scapis brunneis: e remigibus primâ secundâque suprà æneo-viridibus, cuprescenti-irideis: tertiariis cineraceo-pallidis, quarumque longissima est maculâ æneo-viridi prope apicem gaudet: tectricibus alarum minoribus brunnescente-cinereis, flavo marginatis: plumis quatuordecim caudam constituentibus, subtùs pallidè cinereis, supernè dilutioribus: scapis subtùs albis, suprà fusco-brunneis: rostro atro-virente: tibiis cærulescentibus: iride rubrâ, pupillam annulo aurantio circumdante: unguibus aduncis admodùm compressis.

General form like the foregoing species: front and scapular band crimson: head and neck white, tinged with yellow; the feathers cinereous at base, and having a pale yellow band across their centres: breast-feathers deeply notched, and having a broad lake-coloured band across the middle of each; below the notched feathers, an orange-coloured spot reaches to the belly: vent-feathers white, tipped with pale yellow: under tail-coverts lake-red: scapulars and back greenish-yellow: wings plumbeous, or ashy beneath; the quills being plumbeous, and the lesser coverts light ash, the two colours gradually running into each other; quill-shafts brown: above, the first and second quills are bronze-green, with coppery

reflections; tertiaries pale ash, the longest having a bronze-green spot near the tip: lesser wing-coverts brownish-ash, margined with yellow: tail composed of fourteen feathers, pale ash-colour beneath, lighter above; shafts white beneath, dark brown above: bill dark green: legs pale blue: irides red, with an orange-coloured ring around the pupil: claws curved, and much compressed.

Total length, $8\frac{3}{4}$ inches; extent of wings, $15\frac{1}{2}$ inches; tail, 3 inches; bill, $\frac{4}{10}$ inch; to the angle of the mouth, $\frac{13}{20}$ inch; tarsus, $\frac{8}{10}$ inch; middle toe, including the nail, $\frac{9}{10}$ inch; nail, $\frac{1}{4}$ inch.

The specimen was a male, in adult plumage, Plate LIV. Fig. 1, and was obtained at the Island of Upolu. Fig. 2 differs but little from the above: the wing-coverts are more ashy and not so brown; the light colour of the neck and lower parts is more pure, and the orange spot is not so much diffused on the breast; besides which the tertiary feathers are bronze-green, with yellow margins, and not ash-coloured with a bronze spot: otherwise these two were alike, in sex, measurement, colour of the bill, feet, irides, &c. It was obtained at the village of Mathuata, at the Feejee Islands, where we observed that they inhabited the mountain gorges, and were not abundant. Fig. 3 was obtained with the last; it is a trifle less, and it is believed a younger bird, showing that in their first plumage, they are entirely green, the feathers margined with yellow. It also was a male.

La Perouse, in the journal of his melancholy voyage, notices beautiful Doves, of various colours, when at the Navigators' Islands, in the same harbour where our first specimens were obtained, probably alluding to this very species to which we apply his name. The native name *Manu-ma*, means shame or modest bird.

CARPOPHAGA SPADICEA.

Chestnut-shouldered Pigeon. *Columba spadicea.* Latham, General Hist. of Birds, vol. viii. p. 31.
New Zealand Pigeon. *Columba Zealandica?* Latham, Gen. Hist. of Birds, vol. viii. p. 24.
Columba géant. Temm., Hist. Nat. Gen. des Pigeons et Gallinacés, vol. i. p. 74.
Columba géant. Lesson, Voy. de Coquille, Zool., tom. i. pt. 2, p. 710.

Collection Exp. Exp.

The *Cucupyi*, or Virgin, as this beautiful Pigeon is called by the Mauries (natives), was observed in great numbers in the woody districts of the Bay of Islands, New Zealand. We never saw it alight on the ground, but observed that they preferred the hilly country, and dense foliage of tall forest trees for their retreats. It is said to inhabit Norfolk Island, but we have not met with it on any other island than the one above named.

The sexes differ but little from each other; the males being a trifle the larger, and more brilliant in golden and copper reflections. A female measured 19⅛ inches in length, and 32½ inches across the wings; irides, bill, and feet, lake-red; the tip of the bill orange-colour, shaded gradually into the red.

CARPOPHAGA ÆNEA.

Nutmeg Pigeon. *Columba ænea.* Latham, Gen. Hist. of Birds, vol. viii. p. 19.

Colombe muscadivore. Columba ænea. Temm., Hist. Nat. Gen. des Pigeons et des Gallinacés, 8vo. ed. tom. i. p. 86.

Collection Exp. Exp.

This species was seen in abundance at the Island of Mindanao, one of the Philippine Group, and at Mangsi, one of the Sooloo Islands. Their cry is a single hoot, repeated at intervals, and when our specimens were collected in the month of January, they did not present any appearance of a knob on their bills; the irides are red, the bill black, and having a light blue tip; the feet are dirty lake-red. We found them generally amongst the thick foliage of the various species of Ficus, and other fruit trees.

CARPOPHAGA OCEANICA.

Columba oceanica. Lesson, Voy. de la Coquille, Zool., tom. i. pt. 2, p. 708, pl. 41.

Lupi of the Samoans.

Collection Exp. Exp.

At the Samoan Islands, particularly Upolu, we saw this species in great abundance: the woods abounded with them wherever fruit or berries occurred; they were exceedingly fat, and afforded us many delicious meals. At Tongatabu we saw them, but not in such great numbers; and again a few were seen at the Duke of York's Island.

While crossing the Island of Upolu, we now and then saw little thatched houses of only four or five feet elevation, by six or seven feet long; these were built in open spaces, on mountain promontories, and we were informed had been constructed as blinds, or places of concealment, from which "Lupi's" were *caught with arrows.*

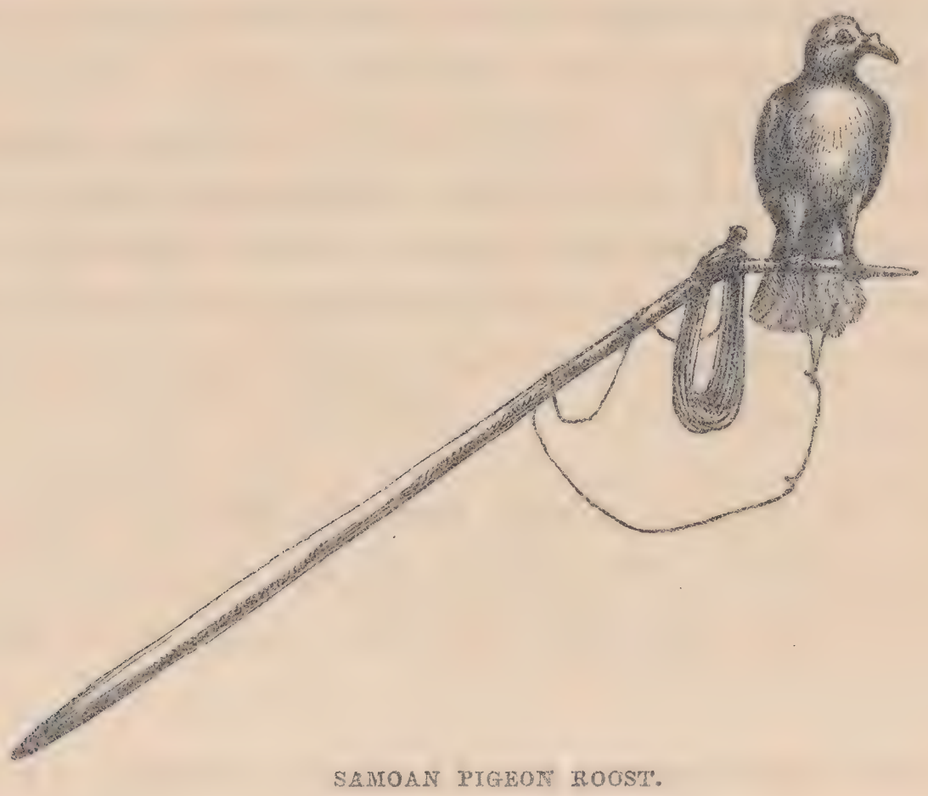
The bows used for this purpose are short, not more than three or four feet; but the arrows are six or seven feet long, made of light cane, and having four pointed and barbed pieces of hard wood inserted at the end, with their barbs pointing inwards; these being slightly elastic, and wide enough between the points to receive the body of a Lupi, which is about the size of a domestic pigeon; when an arrow is discharged from the bow at a Lupi, *the chances are in favour of the bird's being caught between the points*, and held there, until taken out alive. Much time is devoted to capturing and taming this beautiful species of Pigeon; they may be seen in almost every house, and even in their canoes, where perches are erected expressly for them. They are generally kept very clean, and in good condition.

The process of taming a wild bird occupies much time, and is accomplished by connecting the two feet by a hopple made of fine cord, wrapped with *tapa* so as not to hurt them; this is joined to a cord twenty or thirty yards long, the opposite end of which is fastened to a perch. The bird is then thrown up, and flying to the length of the cord, is gently jerked back; the violence of the jerk being proportioned to the necessary discipline. The operation appears painful, and the distressed pupil is kept flying until it discovers that there is no resting-place but its master's hand, or the perch. It soon gains confidence, and not being allowed to receive any food but chewed taro, or bread-fruit from its master's mouth, becomes very tame.

While in port at the Samoan Islands, our ships were constantly surrounded by the canoes of the natives, in many of which, roosts were stuck up, and pigeons perched on them; they had cords fastened to their feet, though they seldom attempted to fly, all appearing to be on the most familiar terms with their owners, who could seldom be induced to part with their pets. Doves (*Ptilinopus fasciatus*) were frequently seen domesticated by the natives in the same manner, but they were not in as perfect discipline, or so highly valued.

An average-sized male, killed at Upolu, was sixteen and a half inches long, by twenty-nine inches extent of wings. A female was fifteen and three quarter inches long, and twenty-eight inches in extent across the wings.

The knob, or caruncle, over the nostrils, was not seen rounded in the form figured by MM. Lesson and Garnot, in the Zoological Atlas to the Voyage of the Coquille, pl. 41, but more in the form of the outline below the description of C. Auroræ, which was sketched from a living specimen.



SAMOAN PIGEON ROOST.

CARPOPHAGA LATRANS.—(Nob.)

PLATE LV.

Manu-mon of the Feejeeans.

Collection Exp. Exp.

C. capite, collo pectoreque fusco-vinaceo-griseis, vertice pectoreque vinaceo saturatissimis: alis spadiceis; primariis vix non nigris, pogoniis ipsarum externis cinerascente-griseis; remigum tertiâ longissimâ; primâ valde angustâ et acuminatâ, tertiam integrâ unciâ superante; scapis nigris: caudâ spadiceo-viridi, ferè æquatâ, quam quatuordecim componunt plumæ rectæ, latæ, apicibus rotundatæ, subtùs dilutocinnamomeæ: scapis suprà obscuro-æneis, subtùs brunnescenti-albis: alis subtùs castaneis: ventre cinnamomeo: ano crissoque fulvis: rostro nigro, gracili, naribus parvis linearibusque: iride sanguineâ: palpebris puniceis: pedibus sanguineis: plumis fulvi coloris ad hallicem usque tarsos contegentibus: setis brevibus nigris utrinque scutellarum digitos posticos cooperientibus.

Head, neck, and breast, dark vinaceous-gray, the vinaceous tinge strongest on the crown and breast: wings snuff-coloured brown, the primaries nearly black, with ashy-gray outer webs; third quill longest, the first very narrow and pointed, one inch shorter than the third; shafts black: tail rich snuff-coloured brown, nearly even, consisting of fourteen straight, broad feathers, rounded at their ends, and of a light cinnamon-colour beneath; shafts dark brown above, brownish-white beneath: under parts of the wings chestnut-brown: belly cinnamon; vent and under tail-coverts tawny: bill black, slender, the nostrils small and linear: irides lake-red: eyelids carmine-red: feet lake-red; the tarsi covered down to the hallux with tawny-coloured plumage; hind toes covered each side of the plates with short black bristles.

Total length, $18\frac{1}{4}$ inches; wings, from the flexure, $10\frac{1}{4}$ inches; tail, 7 inches; bill, $\frac{19}{20}$ inch; to the corner of the mouth, $1\frac{6}{10}$ inch; tarsi, $1\frac{2}{10}$ inch; middle toe, including the claw, $1\frac{6}{10}$ inch; claw, $\frac{1}{2}$ inch. Male.

The females are more brown, and have not so much of a mealy-gray colour about the head and neck. Total length, $16\frac{1}{8}$ inches long, and 28 inches in extent across the wings.

This species was usually found in lofty forest trees with dense foliage, and bearing a fruit on which they fed. Their voice is quite peculiar; it consists of a puffing blow, not unlike that uttered by a strutting Turkey, followed by a whoo-whoo, at short intervals, sounding like the barking of a dog, for which reason we have given the specific name *latrans*. The native name appears somewhat similar, *manu* being the Feejee for bird, and *mov*, an imitation of its note. We did not see them any where but in mountainous districts at the Feejee Islands.

CARPOPHAGA AURORÆ.—(Nob.)

Plate LVI.

Collection Exp. Exp.

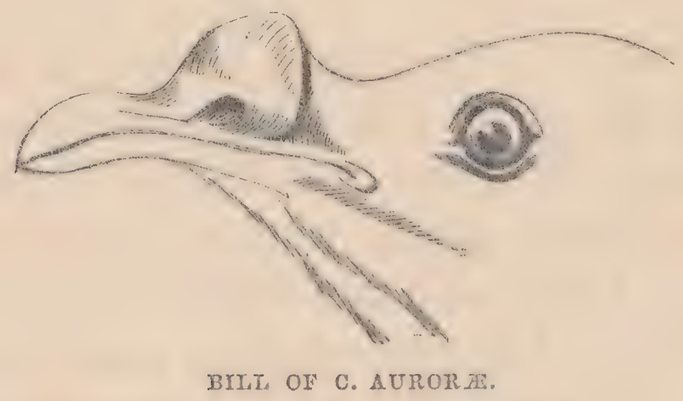
C. capite, collo pectoreque cinereis: ad basin rostri nivea, sensim versùs anum plumbeum obscurascens: dorso, alis caudâque cyaneis viridi-

irescentibus: crisso metallicè viridi; alarum caudæque partibus subjacentibus obscuro-artesiacis: rostro nigro: pedibus sanguineis: iride carmesino-splendente: unguibus nigris; remigum tertiâ quartâque æqualibus et longissimis; caudâ latâ, æquatâ, ultra alas compressas $2\frac{7}{8}$ uncias protentâ, quatuordecim constitutâ plumis, quarum scapi nigri.

Head, neck, and breast, ash-colour; pure white at the base of the bill, and gradually becoming darker towards the vent, which is lead-colour; back, wings, and tail, dark blue, with green metallic reflections: under tail-coverts metallic-green: under parts of the wings and tail dark slate-colour: bill black; feet lake-red; irides bright crimson: claws black: third and fourth quills equal, longest: tail broad, even, extending $2\frac{7}{8}$ inches beyond the closed wings, consisting of fourteen feathers: all the shafts black.

Total length, $16\frac{3}{4}$ inches; extent across the wings, 31 inches; wings, from the carpal joint, $10\frac{3}{4}$ inches; tail, $6\frac{9}{20}$ inches; bill, $\frac{9}{10}$ inch; to the corner of the mouth, $1\frac{7}{20}$ inch; tarsi, $1\frac{1}{2}$ inch; middle toe, including the claw, 2 inches; claw, $\frac{6}{10}$ inch. Male.

This beautiful Pigeon was found in great abundance in high woody districts, amongst the coral rocks on Aurora or Maitia Island, one of the Society Group. All that we obtained were males, and found solitary amidst the thick foliage of *Guetarda speciosa*, on the fruit and flowers of which they were feeding, and were very fat. Their note was a single, deep and sonorous hoot, which might readily be mistaken for that of an owl; they were not shy, but it was difficult to see them when sitting in the thick foliage, as they remained perfectly still on our approach.



BILL OF C. AURORÆ.

CARPOPHAGA WILKESII.—(Nob.)

Plate LVII.

Collection Exp. Exp.

C. capite, collo, pectore, abdomine femoribusque fuliginosis: dorso, alis caudâque cyaneis metallicè viridi-irideis: alarum caudæque partibus subjacentibus obscurè artesiasis; scapis nigris: è primariis tertiâ longissimâ, secundâ tertiæ æquali: caudâ tres pollices ultra alas se extendente, æquatâ, nonnisi duodecim complectente plumas: super rostrum nigrum tuberculo cartilagineo: tibiis aurantio-brunneis: unguibus sepiaci coloris: iride sanguineâ: plumis rostri basin præcingentibus, albis.

Head, neck, breast, belly, and thighs, fuliginous: back, wings, and tail, dark blue, with green metallic reflections: wings and tail dark slate-colour beneath; shafts black, third primary longest, second and fourth equal: tail reaching full three inches beyond the wings; even at the end, and consisting of but twelve feathers, being two less than *C. Auroræ:* bill, with a cartilaginous knob, black: feet orange-brown; nails sepia-brown: irides lake-red: feathers at the base of the bill, white.

Total length, 19 inches; wing, from the carpal joint, $11\frac{1}{2}$ inches; tail, $6\frac{8}{10}$ inches; bill, $\frac{9}{10}$ inch; to the corner of the mouth, $1\frac{9}{20}$ inch; tarsi, $1\frac{4}{10}$ inch; middle toe, including the nail, 2 inches; nail, $\frac{1}{2}$ inch. Male.

The natives of Tahiti, in describing the productions of their beautiful island, told us that there was a large species of bird found high up in the mountains, which fed upon the *fei*, a species of red plantain (*Musa rubra?*), which grows wild in very elevated situations; and that they had always been unsuccessful in their attempts to get them for the naturalists of the expeditions which have so frequently anchored in their harbours. We were successful, after great labour and peril, in reaching the region, and shooting several, but felt disap-

pointed at the time, as we believed them to be identical with the last described species (*Carpophaga Auroræ*), and notwithstanding the Tahitian assurances to the contrary, remained of the same opinion until the Expedition returned to the United States, when a comparison of specimens, which could not be made sooner, proved that the islanders were correct.

It was raining incessantly all the time we remained in the elevated situation where this Pigeon was obtained; we had no shelter, having to sleep on the ground in wet clothes, and were in consequence obliged to return without finding the nests, or learning that it had any peculiar habits, further than its being restricted to certain regions in the mountains, at an altitude of three or four thousand feet; and is seldom, if ever, seen on the coast; being, probably, so limited in range by its favourite food, the *fei*. A specimen now in the National Collection in the City of Washington, was killed by Captain Wilkes, (to whom we have dedicated the species,) at Aurora or Maitia Island, which, as far as we could learn, does not produce *fei's*.

CARPOPHAGA CASTA.—(Nob.)

Plate LVIII.

Collection Exp. Exp.

C. capite, collo, corpore, caudæ parte dimidiatâ, tegminibus alarum superioribus inferioribusque, scapularibus tertiariisque, avi adhuc vivente, delicatè eborinis, in pelle autem desiccatâ, in album pallentibus: alulâ, primariis atque secundariis, atris; scapis nigris; remigum secundâ longissimâ: caudâ aliquantulùm rotundatâ, quatuordecim constante plumis, quarum sex quæ intermediæ jacent, dimidio apicali nigræ sunt, qui color in reliquis gradatim angustior fit, extimis binis plumis tantummodò apicem nigrum exhibentibus; omnes nigro marginatæ sunt ferè usque ad corpus: rostro, palpebris pedibusque pallidè cæruleis: rostri apice unguibusque nigris: iride brunneâ. Mas.

Head, neck, body, half of the tail, wing-coverts, above and beneath, scapulars, and tertiaries, of a delicate cream-colour, while the bird is living, but which changes to white in the dried skins: spurious

wings, primaries, and secondaries, pure black, with black shafts; second quill longest: tail slightly rounded, consisting of fourteen feathers; the middle six black half way from their extremities, the others have the black gradually narrower, the outer two being merely tipped; they are margined with black on the outer webs, nearly to the body: bill, eyelids, and feet, pale blue; tip of the bill and claws black: irides brown. Male.

Total length, $16\frac{1}{2}$ inches; extent of wings, $29\frac{1}{4}$ inches; wings, from the carpal joint, $10\frac{1}{4}$ inches; tail, $5\frac{5}{10}$ inches; tarsi, $1\frac{3}{20}$ inch; middle toe, including the claw, $1\frac{8}{10}$ inch; claw, $\frac{1}{2}$ inch; bill, $\frac{9}{10}$ inch; from the corner of the mouth, $1\frac{1}{2}$ inch.

This chaste and beautiful Pigeon was seen in large flocks near the town of Soung, the capital of the Sooloo Islands. The specimen from which our drawing was made, was killed on an island nearly opposite to Soung, where we found them, during the heat of the day, sitting quietly amongst the dense foliage of large trees bearing a fruit having the appearance of olives, but smaller; with this fruit their crops were filled, and the birds were in excellent condition. Their voice is a tremulous and continued coo; their flight rapid, and dodging like the domestic Pigeons.

The species is more nearly allied to *Columba luctuosa*, of Reinwardt,* than to Temminck's *Columba littoralis*,† being three and a half inches longer, besides other differences, the principal of which is, its having two more feathers in the tail.

PERISTERA PECTORALIS.—(Nob.)

Plate LIX.

Collection Exp. Exp.

P. corpore robusto: capite, collo pectoreque fulvis, fronte pallidissimâ: nuchâ nigricanti-purpureâ: scapularibus fusco-olivaceis, aurescente-irideis: alis, corpore caudâque sepiacis; rectricum remigumque su-

* Temm., pl. col. 247.

† Histoire Nat. Gen. des Pigeons et des Gallinacés, tom. i. p. 99.

perficie in fusco-griseum vergente : remigibus arcuatis ; tertiâ ex ipsis longissimâ ; scapis brunneis : caudâ rotundatâ, duodecim constitutâ plumis, pollicem ultra alas porrectá : unguibus brevibus, fermè rectis, nigris : iride rubeaceo-brunneâ : pedibus tibiisque magnis rubescente-brunneis : rostro nigro.

Body robust : head, neck, and breast, fulvous, palest on the forehead ; nape dark purple : scapulars dark olive-green, having a golden iridescence : wings, body, and tail, sepia-brown, inclining to dark gray on the upper surfaces of the tail-feathers and quills : quill-feathers arcuate, the third one longest ; shafts brown : tail rounded, consisting of twelve feathers, and extending one inch beyond the closed wings : claws short, nearly straight, and black : irides reddish-brown : feet and legs large, and of a reddish-brown : bill black.

Total length, $8\frac{1}{2}$ inches ; tail, $4\frac{1}{2}$ inches ; extent across the wings, $15\frac{1}{2}$ inches ; bill, $\frac{11}{20}$ inch. Female.

Of this plump partridge-like Dove, but little can be said at present ; we never saw but two specimens, which were found at Carlshoff, one of the Coral Islands of the Paumotu Archipelago. The whole island on which they were killed contains but a few acres of forest land ; under the trees were dense and tall bushes, from amongst which they flushed like Partridges, their wings producing much the same whirring sound. Not having a dog to rouse them, we were unable to find any more.

This may possibly prove to be identical with Latham's Garnet-winged Pigeon,* said to have been found at the Island of Eimeo, by Captain Cook, but the difference of plumage, as well as locality, constrains us to offer it as new.

* General History of Birds, vol. viii. p. 71.

CHÆMEPELIA MINUTA.

Passerine Turtle. *Columba minuta.* Latham, Gen. Hist. of Birds, vol. viii. p. 93.
Columba minuta. Temm., Hist. Nat. Gen. des Pigeons et des Gallinacés, tom. i. p. 432.

Collection Exp. Exp.

Common in the vicinity of Callao, Peru, in the month of July. They have all the habits of the Ground Doves (*C. passerina*), of the southern United States; they spend most of the time on the ground, but frequently alight on bushes.

GEOPHILUS NICOBARICA.

Nicobar Pigeon. *Columba Nicobarica.* Latham, Gen. Hist. of Birds, vol. viii. p. 84.
Galline à Camail. Temm., Hist. Nat. Gen. des Pigeons et des Gallinacés, 8vo. tom. i. p. 385.

Collection Exp. Exp.

This beautiful bird was seen at the Philippine Islands, but subsequently found in greater abundance at the Island of Mangsi, in the Straits of Balabak, during the month of February. We had previously seen them living in confinement, and as the generic name implies, observed that they preferred being on the ground, and seldom perched on the trees, or the roosts of an aviary. It was therefore a matter of surprise at Mangsi, to find them decidedly arboreal; not a single specimen was seen on the ground, although the island was diligently hunted with that expectation. They were found on lofty Ficus, and other fruit trees of great magnitude, feeding with Nutmeg Pigeons (*Carpophaga ænea*), but generally at a less elevation. Their call is a clear, deep-toned coo, in a voice very like some of the owls.

A short description is subjoined, which was taken from a very perfect male specimen, killed at Mangsi.

The bill is black, and has an elevated, soft, nasal inflation: head deep blue-black: the upper pendant plumes of the neck, are purple, the lower plumes golden green, with blue edges: all the dorsal plumage more or less acuminate, of a rich golden green colour, with deep blue and purple reflections: tail pure white, consisting of twelve feathers, the larger upper coverts only white; the under coverts all white: quills black, with blue reflections, third one longest, first quill seven-tenths of an inch shorter: all the under parts golden green, each feather tipped with blue: irides red: legs purple lake-red; under parts of the toes, and nails yellow.

Genus DIDUNCULUS.—(Peale.)

Rostrum magnum, compressum, aduncum; culmine quasi in tertiam circuli partem curvato; superioris mandibulæ margine undulato, in medio contracto, valde acuto: mandibulâ inferiori magnâ quæ clausa extra superiorem jacet, bidenticulatâ, apice truncatâ, marginibus acutis, gonyde prominente et rotundatâ.
Nares laterales, ovales, deorsum patulæ, cerâ nudâ circumdatæ.
Lingua carnosa, apice rotundato corneo.
Alæ breves, rotundatæ; alulæ magnæ.
Cauda brevis, ferè quadrata.
Tibiæ magnæ, musculosæ, cute molli contectæ: digiti squamis defensi: ungues validi, incurvi, quorum qui medius est in aciem acutam introrsum expanditur.

Bill large, compressed, hooked; the culmen forming a segment of about one-third part of a circle; margins of the upper mandible waved, contracted in the middle, and very sharp: lower mandible large, closing outside of the upper; double notched, truncated at the extremity, the margins sharp, gonys prominent and rounded.
Nares lateral, oval, opening downwards, and surrounded by a naked cere.
Tongue fleshy, and having a rounded corneous point.
Wings short, rounded; spurious wings large.

Tail short, nearly square.

Legs large, muscular, covered with a soft skin: toes protected by scales; nails strong, curved, the middle one expanded to a sharp cutting edge inside.*

DIDUNCULUS STRIGIROSTRIS.—(Nob.)

PLATE LX.

Manu-mea of the Samoans.

Collection Exp. Exp.

Forma generalis robusta, rotundata, crassa: regio orbitalis denudata, cutis colore saturatè carmesino: rostrum validissimum, non absimile rostro Psittaci at magis compressum elongatumque; mandibulâ inferiori duplici denticulo distinctâ, quæ more peculiari, extrinsecè mandibulæ superiori se claudit: lingua magna, carnosa, ad instar linguæ Psittaci, extremitate autem cuspidata, complanata, cornea sicuti in Gallinaceis; aurantii coloris: caput, collum pectusque nigra, æneo cæruleoque iridescentia: auriculares breves, nigræ, texturâque suâ vix cæteris plumis dissimiles: gutturis plumæ exiguæ; pectoris et colli magnæ: plumæ abdominis anique fuligineæ; dorsi, caudæ, scapulares alarumque tegminum minorum, castaneæ: crissum castaneum: alæ nigricanti-ardesiacæ, vix non nigræ; remigum quartâ longissimâ;

* Since writing the above, Knathodon has been proposed as a name for this genus, by Sir William Jardine, Bart. It would give me pleasure to adopt it, as better than the one now proposed, but for the fact that it has been preoccupied in Entomology.—T. R. P.

radiis ipsarum validis, æquatis, exceptis marginibus exterioribus secundæ, tertiæ, quartæ quintæque angustatis: alulæ magnæ, latæ et acuminatæ: secundariæ latæ, artesiacæ, sensim in castaneum colorem scapularium pallentes: remigum scapi fusco-brunnei: cauda æquata, aut modicè rotundata, plumarum scapis ad basin albis, apicibus brunneis; pogoniis interioribus secundùm dimidium apicale artesiacis: tibiæ magnæ, denudatæ quasi semipollicem supra tarsos, cute molli velutinâ obtectæ, absque scutellis squamisve, intensè carmesinæ: digiti supernè scutellis latis corneis tutati: ungues longi falcatique, quorum medius introrsùm est complanatus necnon et valdè acutus: plumæ totius corporis rhachibus crassis; pogoniis densis; magnoperè incurvatæ, et leviter cuti adhærentes.

The general form of this bird is robust, rounded, and heavy; orbital region naked, the skin of a deep crimson colour; bill orange-coloured, very strong, somewhat like a Parrot's, but more compressed, and elongated; the lower mandible has two notches, and is singular in closing outside of the upper mandible: tongue large, fleshy like a Parrot's, but having a flattened corneous point like the Gallinacea: head, neck, and breast, black, with bronze and blue reflections: auriculars short, black, and differing but little in texture from the other plumage: feathers of the throat very small; of the breast and neck large: abdomen and vent sooty brown: back, tail, scapulars, and smaller wing-coverts, chestnut-brown: under tail-coverts castaneous: wings dark slaty brown, nearly black; fourth quill longest, the webs strong; even, excepting the outer edge of the second, third, fourth, and fifth, which are sloped: spurious wings large, broad, and pointed: secondaries broad, and their colour gradually shaded from slate to the chestnut of the scapulars; quill-shafts dark brown: tail even, or slightly rounded, the shafts white at the base, brown at their extremities; inner webs slate-coloured, half way towards the extremity: legs large, naked about half an inch above the tarsi, covered with a soft velvety skin, without plates or scales, and of a deep crimson colour; the toes are protected above by broad corneous plates; nails long, and curved, the middle one flattened and very sharp on the inner edge: all the plumage thick-shafted, full-webbed, much curved, and but slightly attached to the skin.

Total length of a male, $12\frac{3}{4}$ inches; extent across the wings, 24

inches; bill, measuring from the frontal feathers to the point, in a straight line, $\frac{9}{10}$ inch; following the curve, $1\frac{1}{10}$ inch; wing, from the carpal joint, $8\frac{9}{10}$ inches: tarsi, $1\frac{7}{10}$ inch; middle toe, including the nail, $1\frac{6}{10}$ inch; nail, $\frac{1}{2}$ inch.

Female smaller, more brown, plumage of the head and neck less metallic, but otherwise like the male.

Young: covered with a sepia-coloured down: bill yellow, and have a remarkably wide gape; the lower mandible being so much wider than the upper, as to cover it excepting the hook.

This bird formerly abounded at the Island of Upolu, one of the Samoan Islands, but now, it is considered a rare species by the natives, and one which will be entirely destroyed in the course of a few years, if the same causes exist which are now operating to their destruction. They build their nests and pass most of the time on the ground, and flush like Partridges or Grouse, with a whirring sound produced by their wings. Their food is mostly fruit, including a species of fig growing in the mountainous regions which they inhabit. The tree, called owa by the natives (*Ficus prolixa?* of botanists), producing the fig, is represented on our plate with the bird: it forms a remarkable feature in the Samoan scenery; its broad and ample branches spreading like umbrellas above all the other forest trees, many of which are gigantic, although covered in a measure by these enormous canopies. The trunks of owa trees are little forests in themselves; the one from which our sketch was made, measured one hundred and two feet in diameter, and about the same from the ground to the main branches.

The natives of the Samoan Islands, who spend much of their time indolently, are fond of pets, which are mostly Pigeons, or Doves, their islands not affording suitable quadrupeds. A few years since a passion arose for cats, and they were obtained by all possible means from the whale ships visiting the islands, were much esteemed for a while, until the other pets were devoured by them; after which Pussy (a name generally adopted by the Polynesians for cats), not liking yams and taro, the principal food of the islanders, preferred *Manu-mea*, and took to the mountains in pursuit of them. There the cats have multiplied and become wild, and live upon our *Didunculus*, or little Dodo, the Manu-mea of the natives, which it is believed will in a very few

years cease to be known, excepting by the miserable fragments, now deposited in the National Museum in the City of Washington, unless some more lucky collectors get them better than we did. They are, however, more perfect than the remains of the great Dodo (*Didus ineptus*, of Linnæus), which are preserved in the Ashmolean and British Museums.* We were enabled by great labour to obtain three specimens, one of which was lost by the wreck of our ship; the other two, deposited as stated, are male and female, but badly preserved.

At Tahiti, the Garnet-winged Pigeon (*Columba erythroptera*, of Latham) was said to abound; they have in like manner been destroyed by cats introduced by early navigators, and since become wild, though retaining their varied colours like those domesticated. The Pigeons or Doves are now almost unknown, and the cats are driven to the necessity of feeding on lizards.

* The reader is referred to the following: "A Summary Review of the authorities on which naturalists are justified in believing that the Dodo (*Didus ineptus*, Linn.), was a bird existing in the Isle of France, or the neighbouring islands, until a recent period." By J. S. Duncan, Esq., New College, Oxford. Zool. Journal, vol. iii. art. lxiii. p. 554.

GRALLATORES.

GRUS CANADENSIS.

Ardea Canadensis. Forst. Richardson, Fauna Boreali-Americana, vol. ii. p. 373.
Grus Americana. Audubon, Birds of America, vol. v. p. 188.

Collection Exp. Exp.

This species was found in great numbers in the latter part of July, on the prairies of Oregon, and was seen almost daily in our journey to California. They prefer moist open grounds, and roost generally on small sand-bars in the rivers, where convenient; but never, that we learned, on trees. We do not agree with Wilson or with Mr. Audubon, in believing the "Sandhill," and "Whooping Cranes," to be young and old of the same species; if it was so, we would expect to find at least one old bird in many thousand individuals seen by our parties in Oregon and California, but we did not observe a single specimen of Whooping Crane (*Grus Americana*), although the bird was known by several persons of whom we made inquiry, as a rare visiter on that side of the Rocky Mountains. Sandhill Cranes or Storks (*Grus Canadensis*), were familiar to every person; they are known to breed in the country, and are very abundant. Indians, fur-traders, trappers, and persons living in the forests and prairies, are prone to be observers of natural objects; they are, generally speaking, correct in their knowledge of the larger animals of the country where they range; they consider these two birds as distinct species, and we have no reason to disagree with them. Grus Americana is the larger of the two, and we believe is of a dusky ferruginous colour when young, having seen it in both states of plumage on the salt marshes of Florida, and on the prairies of the Missouri, but it is not common near the Coast of the Pacific Ocean, while, on the contrary, the Grus Canadensis abounds there.

ARDEA SACRA.

Sacred Heron. *Ardea sacra.* Latham, General History of Birds, vol. ix. p. 93.

Collection Exp. Exp.

This species was found to inhabit nearly all the intertropical islands of the Pacific Ocean. We first saw them at the Paumotu Group, then at Tahiti, the Samoan Islands, and subsequently at Tongatabu, and the Feejees. From all these places, we have specimens, which, on comparison, are so much alike, that we are constrained to believe them identical. The young birds are generally, but not always, of a dark brownish slate-colour, a few being white. The adults, on the contrary, are generally snow-white in plumage, but some, having the elongated back and breast plumes which indicate adult plumage, are found of a dark slate-colour, thus indicating that the colour depends on other causes, and is not as in most cases, depending upon the maturity of the bird.

A purple or dark slate-coloured specimen, when killed at Carlshoff Island, in September, had the under mandible green, the upper black; legs green, iris yellow. A white specimen, in about the same state of plumage, each having long straight dorsal plumes, but much worn, had a yellow bill and legs, the latter tinged with green; lores greenish, eyes bright yellow: both specimens were females. Dimensions: 24 inches in length, and 39½ in extent of the wings. In all states of dark plumage, there is invariably a white line running perpendicularly along the throat.

ARDEA HERODIAS.—(L.)

Wilson's Am. Orn., vol. vii. p. 106.
Bonaparte's Synopsis, p. 304.
Richardson, Fauna Boreali-Americana, vol. ii. p. 373.
Audubon, Birds of America, vol. viii. p. 122.

Collection Exp. Exp.

Found in Oregon, on the Columbia River, and in California, though not so numerous as on the Eastern Coast.

ARDEA CANDIDISSIMA.—(Gm.)

Snowy Heron. *Ardea candidissima.* Wilson, Am. Orn., vol. vii. p. 120.
Ardea candidissima. Bon. Syn., p. 305.
Audubon's Birds of America, vol. vi. p. 163.

Collection Exp. Exp.

Specimens were obtained on the Island of San Lorenzo, and a few of the birds were seen in California, near the Bay of San Francisco.

ARDEA NYCTICORAX.—(L.)

Nycticorax Americana. Bon.
Black-crown Night Heron. Audubon's Birds of America, vol. vi. p. 82, pl. 363.

Collection Exp. Exp.

This bird was seen by our parties north as well as south of the Columbia River, in Oregon. Some specimens were obtained in Chili,

but they were all young, darker coloured, and larger than the North Americans, and may eventually prove to be a different species; but we did not see them in adult plumage, and cannot venture to decide that they are not identical with the northern species.

ARDEA EXILIS.

Least Bittern. *Ardea exilis.* Wilson, Am. Orn., vol. viii. p. 37.
Least Bittern. Audubon, Birds of America, vol. vi. p. 100.

When at Oahu, this species, or one closely allied to it, was ascertained to frequent the fresh-water streams and taro patches in the neighbourhood of Pearl River; but having lost the specimens in the wreck of the U. S. Ship Peacock, it is now impossible to assert positively that they are identical; the resemblance is very close.

ARDEA PATRUELIS.—(Nob.)

PLATE LXI. FIG. 1.

Collection Exp. Exp.

A. specie generali dimensionibusque similis Ardeæ virescenti Americæ Borealis; illi quoque voce assimilatur: subcristata; vertice dorsoque viridibus; caudæ parte supernâ concolore, omnibus cinereo-purpureove-irescentibus in propriâ luce conspectis: alarum tegminum marginibus rufescenti notatis: primariis fusco-brunnescenti-griseis, scapis nigris; remigum secundâ longissimâ, primâ tertiæ æquali: caudâ rotundatâ, rhachibus supernè nigris, infrà albis: colli lateribus, pectore, abdomine crissoque fulvescenti-cinereis: lineâ albâ in colli parte anticâ ex rostro ad pectus usque protentâ, in cujus vicinitate plumas prope summitatem macula fulva denotat: alis subtùs cinereis, anticè albo marginatis: rostro desuper nigro, subtùs flavo: loris viridibus; maculâ flavâ ante et supra oculos: tibiis flavis: unguibus brunnescentibus.

In general appearance and size, this is like the Green Heron (*Ardea virescens*), of North America, its voice resembles it. Subcrested; crown, back, and upper surface of the tail, green, all having cinereous or purple reflections when viewed at particular angles with the light: wing-coverts edged with rufous; primaries dark brownish gray; shafts black; the second quill longest, first and third equal: tail rounded, the shafts black above, white beneath: sides of the neck, breast, belly, and under tail-coverts, tawny ash-colour, a white line in front of the neck, which reaches from the bill to the breast; near this the feathers have each a tawny spot on the tip: under parts of the wings ash-coloured, with a white margin in front: bill, above black, beneath yellow; lores green, with a yellow spot in front of, and above the eye: legs yellow, the claws pale brown.

Total length, 16 inches; wing, from the carpal joint, $7\frac{3}{10}$ inches; tail, $2\frac{8}{10}$ inches; bill, $2\frac{6}{10}$ inches; to the corners of the mouth, $3\frac{1}{2}$ inches; tarsi, $1\frac{8}{10}$ inch; middle toe, including the claw, 2 inches; claw, $\frac{7}{20}$ inch. Male.

The females are somewhat larger, but in plumage resemble the males. The young birds have their sides, belly, and under tail-coverts of a ferruginous buff-colour, which also descends from the head down the sides of the neck, each feather having longitudinal double lines of dusky black: legs dirty green.

Common at Tahiti, along fresh-water streams.

TANTALIDÆ.

IBIS FALCINELLUS.—(L.)

Bay Ibis. *Tantalus falcinellus.* Lath., Gen. Hist. of Birds, vol. ix. p. 152.
Ibis falcinellus. Bon., Am. Orn., vol. iv.
Ibis Ordii. Darwin, Zool. of the Beagle, pt. iii. p. 129.
Ibis falcinellus. Audubon, Birds of America, vol. vi. p. 50.

Collection Exp. Exp.

This interesting bird was observed in flocks of fifteen or twenty, along the banks of fresh-water streams, and lakes, in Chili, during the month of May; their flight was easy and graceful. The only specimen saved was in immature plumage, having the head, neck, and belly, sepia-brown; a double line of white on each of the feathers of the head and neck: bill brown: legs dusky.

Two specimens in perfect plumage, agreeing exactly in size, shape of the bill, &c., with the above, were obtained in Oregon; their bills are reddish-brown, and their legs dusky flesh-colour: their heads are not green, as represented in Mr. Audubon's plate, but chestnut, highly glossed with purple; they have a white line of feathers around the lores, which joins under the throat; the measurement also differs.

Specimen killed at Great Egg Harbour, New Jersey, figured in Bonaparte's Am. Orn.: Total length, 26 inches; bill, from the corner of the mouth, 5 inches; tarsi, 4 inches; naked part of the tibia, 3 inches; middle toe, excluding nail, $2\frac{1}{2}$ inches; hind toe, 1 inch.

Specimen killed in Oregon, Collection U. S. Exploring Expedition, Washington, D. C.: Total length, $20\frac{1}{2}$ inches; bill, from the corner of the mouth, $4\frac{2}{10}$ inches; tarsi, 3 inches; naked part of the tibia, $1\frac{8}{10}$ inch; middle toe, excluding nail, $2\frac{4}{10}$ inches; hind toe, $\frac{9}{10}$ inch.

IBIS BREVIROSTRIS.—(Nob.)

PLATE LXI. FIG. 2.

Collection Exp. Exp.

I. capite, collo, pectore, ventre femoribusque sepiacis, prope caput pallidissimis: capitis plumis albo tenuiter marginatis: dorso, alis caudâque olivaceis, cæruleo purpureoque irideis: rostro brevi, ad basin valido, ad apicem angusto, modicè curvato, fuscescenti-brunneo: tibiis valdè crassis; digitis brevibus; unguibus brevibus, rectis, nigris: iride brunneâ. Mas.

Head, neck, breast, belly, and thighs, sepia-brown, lightest near the head: feathers of the head finely edged with white: back, wings, and tail, olive-green, with a blue and purple gloss: bill short, strong at the base, narrow at the tip, slightly curved, and of a dark brown colour: legs very thick, the toes short, having short, straight black nails: irides brown. Male.

Total length, $20\frac{7}{10}$ inches; wing, from the carpal joint, 12 inches; tail, $4\frac{3}{20}$ inches; tarsi, $2\frac{17}{20}$ inches; bare part of the tibia, $1\frac{1}{4}$ inch; middle toe, including the nail, $2\frac{2}{10}$ inches; nail, $\frac{4}{10}$ inch; hind toe, including the nail, 1 inch; nail, $\frac{7}{20}$ inch; bill, $3\frac{9}{20}$ inches; to the corner of the mouth, $3\frac{1}{2}$ inches.

It was killed on the River Rimac, in Peru, in July. But few others were seen, and they were all solitary, and seemed to prefer thick reedy swamps, like the Rallidæ.

RALLIDÆ.

GALLINULA CHLOROPUS.—(L.)

Gallinula galeata. Bonap., Am. Orn., vol. iv. p. 128.
Common Gallinule. *Gallinula chloropus.* Audubon, Birds of America, vol. v. p. 132, pl. 304.

Notes taken at the time specimens of a Gallinule were obtained, which inhabit the taro ponds at the Island of Oahu, leave but little doubt of their identity with this species. The skins were subsequently lost, and consequently no comparison has been made. When fresh killed, a male measured thirteen and a half inches in length, and twenty two and a half inches in extent: irides burnt umber-colour; tip of the bill, and legs, pea-green; frontlet, and rings on the tibia, bright crimson: a pale crimson blush on the front of the tarsi.

This species has been known to breed on the River Delaware, in Pennsylvania.

PORPHYRIO SAMOENSIS.—(Nob.)

PLATE LXII. FIG. 1.

Collection Exp. Exp.

P. rostro verticeque carmesinis: pedibus flavis, carmesino imbutis: genis atque occipite nigris: dorso, scapularibus tectricibusque alarum majoribus olivaceis: alis caudâque nigris, pogoniis externis cœrulescenti-viridi tinctis: collo ventreque lazulinis: pectore, margine superno alarum cobalticis: totius corporis plumis juxta corpus nigris, scapis albis: crisso albo, rhachibus albis.

Bill and vertex crimson: feet yellow, dashed with crimson: cheeks, and occiput black: back, scapulars, and greater wing-coverts, olive-brown: wings and tail black, with a tinge of blue-green on the outer webs: neck and belly ultramarine-blue: breast and upper margin of the wing cobalt-blue: all the plumage of the body black next the body, and having white shafts: under tail-coverts white, with white shafts.

Total length, $17\frac{2}{10}$ inches; wing, from the carpal joint, $9\frac{4}{10}$ inches; bill, from the back of the frontal plate, $2\frac{1}{2}$ inches; from the corner of the mouth, $1\frac{7}{10}$ inch; depth of the upper mandible at its base, $\frac{1}{2}\frac{1}{0}$ inch; depth of the lower mandible, $\frac{3}{10}$ inch; tarsi, $3\frac{2}{10}$ inches; middle toe, including the nail, $3\frac{8}{10}$ inches; nail, $\frac{7}{10}$ inch; hind toe, $1\frac{8}{10}$ inch; nail, $\frac{1}{2}\frac{3}{0}$ inch.

This species was found to be abundant in all the fresh-water ponds of the Island of Upolu, one of the Samoan Group; they were also frequently flushed from grassy meadows.

PORPHYRIO VITIENSIS.—(Nob.)

Plate LXII. Fig. 2.

Collection Exp. Exp.

P. formâ specieque generali Samoensis, dimensionibus verò minor, lamellâ frontali minori, remigibus apice magis cuspidatis: partium corporis subjacentium colore minùs lazulino splendente: cætera illi similis.

Form and general appearance like that of the foregoing, but smaller, having the frontal plate less, and the tips of the quill-feathers more pointed; the blue on the under parts of the body less brilliant; in other respects the same description would answer for both.

Total length, $13\frac{3}{10}$ inches; wing, from the carpal joint, $8\frac{4}{10}$ inches; bill, from the back of the frontal plate, $1\frac{1}{2}\frac{9}{0}$ inch; to the corner of the mouth, $1\frac{3}{10}$ inch; depth of the upper mandible at its base, $\frac{1}{2}$ inch;

lower mandible, $\frac{3}{10}$ inch; tarsi, $2\frac{3}{10}$ inches; middle toe, including the nail, $3\frac{1}{10}$ inches; nail, $\frac{6}{10}$ inch; hind toe, including the nail, $1\frac{1}{2}$ inch; nail, $\frac{13}{20}$ inch.

Inhabits swampy grounds and taro ponds of the Feejee Islands, and supposed to be rare, as we obtained but two specimens.

RALLUS PHILIPPENSIS.—(L.)

Philippine Rail. *Rallus Philippensis.* Lath., Gen. History of Birds, vol. ix. p. 373.

Collection Exp. Exp.

Specimens were procured at the Samoan or Navigators' Islands, the Feejees, Tonga, and New Holland. They vary but little in either size or plumage, all have a ferruginous band across the breast at certain times, and are without it at others. They frequent grassy and shrubby grounds, and it is very difficult to make them take to their wings, but they run with considerable speed; without a dog it is not easy to obtain them, unless by watching a road or path, when a person may now and then see them cross, when it is easy to shoot them.

The iris is reddish-brown: bill dusky flesh-colour: legs yellowish-brown.

Male, killed at Upolu: Total length, 13 inches; extent of wings, 19 inches; bill, to the corner of the mouth, $1\frac{6}{10}$ inch.

Male, killed at Mathuata, Feejees: Total length, $13\frac{1}{8}$ inches; extent of wings, $19\frac{3}{4}$ inches; bill, to the corner of the mouth, $1\frac{1}{2}$ inch.

RALLUS LURIDUS.—(Nob.)

Plate LXIII. Fig. 1.

Collection Exp. Exp.

R. vertice, collo postico, dorso, alis caudâque olivaceo insignibus: genis, collo antico, pectore ventreque fusco-cineraceo-cæruleis; gutturis colore pallidissimo: femoribus anoque olivaceo tinctis: alis fusco-brunneis, scapis nigris; primâ e remigibus multò breviore quam cæteræ; quartâ longissimâ: secundâ tertiâque aliquantulò brevioribus: rostro adunco: utrâque mandibulâ marginibus rotundatis; mandibulâ superiori ad basin cæruleâ, in medio viridi, apice brunneo; mandibulâ inferiori ad apicem brunneâ, in medio viridi, ad basin flavidâ: tibiis pallidè rubris: iride aurantiâ.

Crown, hind part of the neck, back, wings, and tail, rich olive-brown: cheeks, front of the neck, breast, and belly, dark ashy blue; lightest on the throat: thighs and vent tinged with olive-brown: wings dark brown; shafts black, first quill much shorter than the others; fourth one longest, second and third slightly shorter: bill curved, both mandibles rounded at the edges; upper mandible blue at the base, green in the middle, and brown at the tip; lower mandible brown at the tip, green in the middle, and reddish at the base: legs pale red: irides orange.

Total length, 14 inches; wing, from the carpal joint, $6\frac{2}{10}$ inches; tail, 3 inches; bill, $2\frac{3}{10}$ inches; to the corner of the mouth, $2\frac{5}{20}$ inches; tarsi, $1\frac{19}{20}$ inch; middle toe, including the nail, $2\frac{3}{10}$ inches; nail, $\frac{1}{2}$ inch; hind toe, including the nail, $\frac{7}{10}$ inch; nail, $\frac{3}{10}$ inch.

Obtained at Orange Harbour, Tierra del Fuego, where it is not uncommon.

ZAPORNIA SPILINOTA.—(Gould.)

Zapornia spilinota. Gould. Darwin's Zool. of the Voyage of the Beagle, pt. iii. p. 132.

Collection Exp. Exp.

A single specimen was obtained at Ovolau, one of the Feejee Islands. It is without spots on the wings, but in other respects answers to M. Gould's description.

FULICA ALAI.—(Nob.)

Plate LXIII. Fig. 2.

Alai of the Hawaiians.

Collection Exp. Exp.

F. Americanæ multùm affinis, at secundùm dimensiones minor, et rostro tenuiori: capite colloque nigris: corpore obscurè cinereo; dorsi plumis brunneo tinctis: alis brunneis albo marginatis: ex primariis secundâ longissimâ, tertiâ huic ferè æquali; primâ sextâque æqualibus, scapis brunneis: caudâ perbrevi, brunneâ, tegminibus ipsius inferioribus albis: rostro rubescenti-albo, tuberculo frontali pallidè cæruleo: tibiis cærulescenti-viridibus.

Closely allied to Fulica Americana, but smaller, and having a more slender bill; head and neck black; body dark cinereous, tinged with brown on the back: wings brown, margined with white; second primary longest, third nearly equal to the second, first and sixth equal; shafts brown: tail very short, brown, the lower coverts white: bill reddish-white; the frontal knob pale blue: legs bluish-green.

Total length, $14\frac{1}{10}$ inches; wing, from the carpal joint, $7\frac{3}{10}$ inches; bill, to the frontal knob, $1\frac{2}{10}$ inch; including the knob, $2\frac{1}{10}$ inches; to the corner of the mouth, $1\frac{4}{10}$ inch; tarsi, 2 inches; middle toe, including the nail, $3\frac{6}{10}$ inch; nail, $\frac{6}{10}$ inch; hind toe, $1\frac{3}{10}$ inch; nail, $\frac{9}{20}$ inch.

There is so little to distinguish this from *F. Americana*, that we offer the species with some doubt; but the bills of four specimens now in the Collection of the Expedition, are all more slender than the Americans, and are destitute of the brown spots near the tip, which makes a difference, although not great, yet so uniform as to be entitled to consideration.

At the Sandwich Islands they are not uncommon on marshy banks of creeks, and in taro patches, and according to our observations, are restricted to this group.

SCOLOPACIDÆ.

RHYNCHÆA SEMICOLLARIS.

Rhynchæa semicollaris. G. R. Gray. Gould. Darwin's Zool. of the Cruise of the Beagle, part iii. p. 131.

Collection Exp. Exp.

Frequents marshy grounds in Chili during the month of May.

SCOLOPAX MAGELLANICUS.

Scolopax Magellanicus. King, Zool. Journal, vol. iv. p. 93.
Scolopax (*Telmatias*) *Magellanicus.* King. Darwin, Zool. of the Voyage of the Beagle, pt. iii. p. 131.

Collection Exp. Exp.

A very distinct bird from *S. Paraguaiæ*, of Vieillot; the plumage is lighter in colour, and the bill and feet are not so strong in proportion to the size of the bird. We found this species quite common at Orange Bay, Tierra del Fuego.

SCOLOPAX BRAZILIENSIS.

Brazilian Snipe. *Scolopax Braziliensis.* Swainson, Fauna Boreali-Americana, vol. ii. p. 400.
Scolopax (*Telmatias*) *Paraguaiæ.* Vieill. Darwin, Zool. of the Voy. of the Beagle, pt. iii. p. 131.

Collection Exp. Exp.

Our specimens, which were obtained in the vicinity of the city of Rio de Janeiro, are smaller, have shorter bills and tarsi, and appear to form a distinct species from *S. Paraguaiæ*, of Vieillot.

SCOLOPAX AUSTRALIS.

New Holland Snipe. *Scolopax Australis.* Latham, General History of Birds, vol. ix. p. 242.

Collection Exp. Exp.

Specimens obtained at Sidney, New South Wales, are larger than either of the foregoing species; bear the closest resemblance to *S. Magellanica*, but have longer bills and tarsi.

SCOLOPAX PECTINICAUDA.—(Nob.)

Plate LXIV. Fig. 1.

Collection Exp. Exp.

S. dimensionibus et specie generali præcedenti affinis: peculiaris tantummodò in caudæ plumis, quarum viginti et sex numerantur; ex quibus octonæ utrinque pogoniis externis perangustis gaudent, summi-

tate nonnihil dilatatis: colore imo capitis, colli, pectoris, dorsi tegminumque alarum pallidè ferrugineis: vertice vittis binis trajecto; lineâ quoque ex rostro ad oculum porrectâ: colli plumis brunneo lineatis: scapularibus brunneo lineatis fasciatisque: tectricibus alarum minoribus fasciatis; tectricibus ipsarum subjacentibus et laterum plumis albis, nigro vittatis: primariis brunneis; primâ inter eas longissimâ; scapis suprà brunnescentibus, infrà albis: plumarum caudæ apicibus albis, duarum quæ intermediæ sunt, exceptis; inter apicem album et fasciam latam ferruginosam quâ medianæ octo notantur, fasciâ fusco-brunneâ angustâ; ex fasciâ ferrugineâ ad radices usque plumis omnibus brunneo notatis, extimis pallidissimis.

Size and general appearance analogous to the foregoing; the tail-feathers presenting the only striking peculiarity, they are twenty-six in number; the eight outer shafts on each side having very narrow webs, somewhat widened at the ends: the ground colour of the head, neck, breast, back, and wing-coverts, pale ferruginous; two stripes of brown pass over the crown, and another from the bill to the eye: neck-feathers lineated with brown: scapulars lineated and barred with brown: lesser wing-coverts barred; under wing-coverts and flank-feathers white, barred with black; primaries brown, first one longest; shafts, above pale brown, beneath white: tail tipped with white, excepting the two centre feathers; within the white, a narrow dark brown band; and within that again, the eight centre feathers have a broad ferruginous band; from that to the roots all are brown, the outer ones being lightest.

Total length, $10\frac{1}{2}$ inches; wing, from the carpal joint, $5\frac{8}{10}$ inches; bill, $2\frac{6}{10}$ inches; to the corner of the mouth, $2\frac{1}{2}$ inches; tarsi, $1\frac{3}{10}$ inch; middle toe, including the nail, $1\frac{1}{2}\frac{1}{0}$ inch; nail, $\frac{1}{4}$ inch; hind toe, $\frac{1}{2}$ inch; nail, $\frac{3}{2}\frac{}{0}$ inch; tail, $1\frac{6}{10}$ inch.

Our specimens were obtained at Singapore. The "*Sekadidi*," of Sumatra,* and "*Burchet*," of Java,† will probably, on examination, prove to be the same with *S. pectinicauda*, or a species closely allied.

* *Scolopax Gallinago.* Linn. *Sekadidi.* The Snipe. Sir T. S. Raffles's, descriptive catalogue of a Zoological Collection made in Sumatra. Linn. Trans., vol. xiii. p. 327.

† *Scolopax Gallinago.* Linn. *Burchet Javanis.* Dr. Horsfield's Systematic Arrangement and Description of Birds from the Island of Java. Linn. Trans., vol. xiii. p. 191.

GALLINAGO AUCKLANDICA.

Gallinago Aucklandica. G. R. Gray, p. 13, No. 9, pl. 13, No. 3, Zoology of the Voyage of H. M. S. Erebus and Terror, under the command of Captain Sir James Ross, R. N., during the years 1839 to 1843.
Scolopax Holmesii. T. R. Peale, MS. Zool. Report, U. S. Ex. Ex.

Collection Exp. Exp.

But one specimen was saved: it was obtained at Lord Auckland's Islands, by Dr. Holmes, U. S. N., to whom the species was dedicated, but lost by anticipation.

SCOLOPAX MERIDIONALIS.—(Nob.)

PLATE LXIV. FIG. 2.

Collection Exp. Exp.

S. aspectu generali moribusque vivendi scolopacibus borealibus similis, secundùm dimensiones autem grandior, necnon robustior; colore imo omnium plumarum ferrugineo, qui color in gutture et pectore medio pallidissimus evadit: plumis omnibus ad radices nigris, ad apices nigro fasciatis variegatisque, abdominis fasciis perpallidis: strigâ brunneâ ex rostro ad oculum excurrente; alterâ ex fronte ad occiput usque extensâ, quæ in vertice dividitur, lineâ ferrugineâ relictâ: tegminibus alarum caudæque supernè fusco-brunneo vittatis: scapularibus fasciis undulatis fusco-brunneis, sive nigricantibus trajectis, marginibus vero externis fulvescentibus: alis fuscescentibus, subtùs pallidioribus, rhachibus brunneis; remige primâ longissimâ; radiis exterioribus albidis, brunnescenti fasciatis: eodem colore, scil-albido, marginem externum secundæ remigis angustè notante; pogoniis utriusque latis patulisque: caudam fulvam fasciis octo brunneis undulatim signantibus, plumis tenuibus angustisque: crisso fulvo: rostro

valido, subrecto, brunneo: oculis grandibus altè versus capitis partem posticam positis: iride obscurè brunneâ: tibiis validis, carnosis, rubescentibus.

This Woodcock has the general appearance and habits of the northern species (*Scolopax minor*),* but is larger, and a much stronger bird: ground colour of all the plumage ferruginous, palest on the throat and middle of the breast; black at the roots, the tips banded and mottled with black, the bands on the belly being very pale: a brown stripe runs from the bill to the eye; another runs from the forehead to the occiput, and divides on the crown, leaving a ferruginous line: wing and tail-coverts above, barred with dark brown: scapulars crossed by undulated dark brown, or nearly black, bars; their outer edges light fulvous: wings fuscous, lighter beneath; shafts brown, first quill longest, the outer web nearly white, and barred with pale brown; a narrow edge of the same colour on the outer edge of the second quill; both have broad and fully developed webs: tail tawny, with eight undulated brown bars, the feathers weak and narrow; under coverts tawny: bill strong, nearly straight, brown; eyes large, placed high up, and far back on the head: irides dark brown: legs stout, fleshy, pale red.

Total length, 13 inches; wing, from the carpal joint, $6\frac{3}{4}$ inches; bill, $3\frac{7}{20}$ inches; tarsi, $1\frac{3}{10}$ inch; middle toe, including the nail, $1\frac{8}{10}$ inch; nail, $\frac{4}{10}$ inch; hind toe, including the nail, $\frac{1}{2}$ inch; nail, $\frac{2}{10}$ inch.

This Woodcock is common in damp thick forests, or moist, bushy lands, about Orange Bay, Tierra del Fuego. We never saw them on open marshy ground, where the Magellanic Snipe is common.

* *Microptes Americana.* Audubon, Birds of America, vol. vi. p. 15.

LIMOSA FOXII.—(Nob.)

Plate LXV.

Collection Exp. Exp.

L. minor dimensionibus quam L. Hudsonica, fulvescenti-brunnea, subtùs pallidissima: vertice colloque postico umbrino variegatis: pectore lateribusque nonnihil lineatis: plumis dorsi umbrino fasciatis: tectricibus alarum in medio umbrinis, ad margines fulvescentibus: primariis cum ululâ fuliginosis: remige primâ longissimâ: caudâ pallidè fulvâ, fasciis octo pallidè umbrinis signatâ, duodenis constitutâ plumis: rostro aliquantulùm acclivo, versus dertrum tenui, ad apicem dilatato; præter apicem nigrum rubido: tibiis ferè nigris.

Less than Limosa Hudsonica: colour pale tawny brown, lighter beneath: crown and back of the neck mottled with umber: breast and flanks slightly lineated: back-feathers barred with umber; the wing-coverts have umber centres, and light tawny margins: primaries and spurious wings fuliginous, first quill longest: tail light tawny, with eight pale umber bars; it consists of twelve feathers: bill slightly turned upwards, slender towards the point, and dilated at the tip; tip black, the rest reddish: legs nearly black.

Total length, $14\frac{3}{4}$ inches; wing, from the carpal joint, $9\frac{2}{10}$ inches; tail, 3 inches; bill, $2\frac{9}{10}$ inches; to the corner of the mouth, $3\frac{1}{10}$ inches; tarsi, $2\frac{1}{10}$ inches; middle toe, including the nail, $1\frac{7}{10}$ inch; nail, $\frac{1}{4}$ inch.

Obtained at Rose Island, one of the Samoan Group, by Dr. J. L. Fox, U. S. N., to whom we have dedicated the species.

LIMOSA FEDOA.—(L.)

Scolopax fedoa. Wilson, Am. Orn., vol. vii. p. 30.
Limosa fedoa. Sw. Richardson's Fauna Boreali-Americana, vol. ii. p. 395.
Audubon's Birds of America, vol. v. p. 331.

Collection Exp. Exp.

Observed on the Northwest Coast of America, at Puget's Sound, and inthe interior of Oregon; not uncommon.

NUMENIUS HUDSONICUS.

Hudsonian Curlew. *Numenius Hudsonicus.* Latham, Gen. Hist. of Birds, vol. ix. p. 178.
Hudsonian Curlew. Audubon's Birds of America, vol. vi. p. 42.
Hudsonian Curlew. Darwin, Zool. of the Voyage of the Beagle, pt. 3, p. 129.

Collection Exp. Exp.

Killed on the Island of San Lorenzo, Peru, in the month of June. It is remarkable that this bird (if it really is the *N. Hudsonicus?*) should migrate on both sides of the Equator. Mr. Darwin observed them very abundant at Chiloe.

NUMENIUS LONGIROSTRIS.—(Wils.)

Wilson's Am. Orn., vol. viii. p. 23.
Richardson's Fauna Boreali-Americana, vol. ii. p. 376.
Audubon's Birds of America, vol. vi. p. 35.

Collection Exp. Exp.

Quite common on the prairies of Oregon, from the Columbia River to California.

NUMENIUS FEMORALIS.—(Nob.)

Plate LXVI. Fig. 1.

Collection Exp. Exp.

N. collo, pectore, abdomine, ano caudâque luteolis: caudâ verò in ferrugineum vergente: colli pectorisque plumis diluto-brunneo lineatis: abdomine, femoribus, ano caudæque tegminibus absque maculis; femorum plumis confertis, quæ in setas longas desinunt: capite strigis binis latis umbrini coloris insigni, rostri basi oriundis, in occipite coalescentibus; lineâ pallidiore ex rictu secùs auriculares supernas tendente: dorso umbrino; plumis quibusdam ferruginescente marginatis: scapularibus brunneis, diluto-ferrugineo ad margines guttatis; alarum tegminibus concoloribus; remigibus brunneis, flavescenti secundùm marginem pogonii interioris variegatis; remige primâ longissimâ, scapo valido albo; reliquis umbrino tinctis, eò obscurioribus quò magis a primâ distant: alarum tectricibus subjacentibus brunneis, pallido-ferrugineo fasciatis: caudâ bis senis constante plumis, delicatè ferrugineis, fasciis septem fusco-brunneis ipsas notantibus, rhachibus albis: rostro sordidè carneo secùs rictum; eodem colore etiam mandibulæ inferioris dimidium fœdante: mandibulâ superiore vix non nigrâ: iride brunneâ: tibiis cœrulescentibus.

Neck, breast, belly, vent, and tail, pale buff; the latter inclining to ferruginous; the neck and breast-feathers lineated with pale brown: belly, thighs, vent, and tail-coverts, unspotted; feathers of the thighs profuse, and terminating in long bristles: head with two broad lines of umber-colour, commencing at the base of the bill, and uniting on the occiput; a paler line runs from the corner of the mouth along the upper part of the auriculars: back umber-brown, some of the feathers margined with pale ferruginous: scapulars brown, spotted with pale ferruginous on the margins; wing-coverts the same; quills brown, mottled with pale buff on the margin of the inner web; first quill longest, having a strong white shaft, the others tinged with brown, the colour becoming darker as they recede; under wing-coverts brown, barred with pale ferruginous: tail consisting of twelve feathers, of a delicate ferruginous colour, with seven bars of dark brown; shafts white: bill dirty flesh-colour at the corners of the mouth, and one half of the lower mandible; the upper mandible nearly black: irides brown: legs pale blue.

Male: total length, $16\frac{2}{10}$ inches; wing, from the carpal joint, $9\frac{2}{10}$ inches; bill, $2\frac{3}{4}$ inches; to the corners of the mouth, 3 inches; tarsi, $1\frac{9}{10}$ inch; middle toe, including the nail, $1\frac{7}{10}$ inch; nail, $\frac{3}{10}$ inch; hind toe, $\frac{1}{2}$ inch; nail, $\frac{1}{4}$ inch; tail, $3\frac{3}{4}$ inches.

Female: total length, $18\frac{1}{2}$ inches; extent of the wings, $33\frac{1}{4}$ inches; wing, from the carpal joint, $10\frac{8}{10}$ inches; bill, $3\frac{6}{10}$ inches; to the corners of the mouth, $3\frac{9}{10}$ inches; tarsi, $2\frac{1}{10}$ inches; middle toe, including the nail, $1\frac{9}{10}$ inch; nail, $\frac{3}{10}$ inch; tail, 4 inches.

The bills of four females killed at the same time and place, vary in thickness as well as length, as follows: $2\frac{3}{10}$ inches; $2\frac{9}{10}$ inches; 3 inches; $3\frac{6}{10}$ inches. As a common rule in this genus, the length of the bill furnishes but an uncertain specific character.

There does not appear to be any difference in the plumage of the two sexes, unless it be a slightly stronger ferruginous tint in the males. When flying, the pale buff tail-coverts, and light-coloured tail, form a conspicuous distinguishing character; and when killed, the remarkable form of the feathers on the thighs, which terminate in long bristles; a peculiarity which exists in all our specimens.

They were abundant on Vincennes Island, one of the Paumotu

Group, in the month of September, where they had become exceedingly fat by feeding on the berries of a species of *Canthium?* then very plenty. The birds were rather tame, and uttered a clear plaintive whistle when flushed.

RECURVIROSTRA AMERICANA.—(Wils.)

Wilson, Am. Orn., vol. vii. p. 126.
Audubon's Birds of America, vol. vi. p. 24.
Recurvirostra occidentalis. Vigor's Zool. Journal, vol. iv. p. 356.

Collection Exp. Exp.

Not uncommon in Oregon, common in California. Young birds have the head, back, back of the neck, and part of the scapulars, pale cinereous.

TRINGA PARVIROSTRIS.—(Nob.)

Plate LXVI. Fig. 2.

Collection Exp. Exp.

T. aspectu generali gracilis, quamvis pedes habeat magnos, caudamque latam plumosamque: summo capite, dorso, uropygio, alis, caudâque umbrinis: scapularibus, tegminibus alarum caudæque necnon et rectricibus ad margines fulvo maculatis: lineâ superciliari, gutture abdomineque ferè albis: pectore hypochondriisque tenuiter umbrino maculatis: rostro parvo, ad apicem atro, basi olivaceo: pedibus olivaceis: iride fusco-brunneâ.

General appearance light, notwithstanding the feet are large, and the tail broad and full: crown, back, rump, wings, and tail, umber-brown: scapulars, wing-coverts, tail-coverts, and tail-feathers spotted along their edges with tawny: superciliary line, throat, and belly, nearly white: breast and flanks finely spotted with umber: bill

small, black at the tip, olive-green at the base: feet olive-green: irides dark brown.

Total length, $7\frac{3}{4}$ inches; extent of the wings, $13\frac{1}{2}$ inches; bill, $\frac{1}{2}\frac{3}{0}$ inch; to the angle of the mouth, $\frac{8}{1\,0}$ inch; tarsi, 1 inch; middle toe, including the nail, $1\frac{1}{1\,0}$ inch; nail, $\frac{2}{1\,0}$ inch; hind toe, including the nail, $\frac{9}{2\,0}$ inch; nail, $\frac{1}{1\,0}$ inch.

The males and females are nearly alike in size and colour, the females being sometimes a little paler.

Found in considerable abundance on Dog Island, one of the Paumotu Group, on the 21st of August. At that time they had both eggs and young; were so tame as almost to allow themselves to be taken by hand; they had a plaintive, wailing note, and alighted indiscriminately on bushes, or on the ground; their eggs were found in a slight nest constructed of pieces of broken corals and shells, on the ground; are large in proportion to the bird, much pointed at one end, and large at the other; colour pale brown-ochre, spotted with sooty black. Subsequently it was observed at Raraka, another island of the same group, but was not so plentiful.

PHALAROPUS HYPERBOREUS.

Red Phalarope. *Phalaropus hyperboreus.* Latham, Gen. History of Birds, vol. x. p. 1.
Lobipes hyperboreus. Audubon's Birds of America, vol. v. p. 295.

Collection Exp. Exp.

Common in Oregon. Our specimen was obtained on the Willamette River; it was shot while swimming lightly on the water, and throwing its head frequently forward, like some species of Geese.

Large flocks of Phalaropes were seen about midway between the Sandwich Islands and the Columbia River; their flight was wild and swift, and they frequently alighted on the surface of the sea. At a distance, they resembled this species, but none allowed the ship to approach sufficiently near to enable us to feel certain of their identity.

TOTANUS POLYNESIÆ.—(Nob.)

PLATE LXV. FIG. 1.

Collection Exp. Exp.

T. capite, collo postico, dorso, alis caudâque, cinereo-brunneis in olivaceum vergentibus: gutture albo, cinerascenti-brunneo lineato: lineâ superciliari albâ: pectore, abdomine anoque albis, cinerascenti-olivaceo fasciatis: hypochondriis cinerascenti-olivaceis, albo vittatis: remigibus fuliginosis; quarum prima longissima: caudâ subquadratâ, quam duodecim plumæ haud maculatæ componunt, subtus pallidiores, scapis albis: rostri utrâque mandibulâ nonnihil rotundatâ, ardesiacâ; inferiori autem rubro tinctâ: tibiis pedibusque ochraceis: iride brunneâ.

Head, back of the neck, back, wings, and tail, ash-brown colour, inclining to olive: throat white, lineated with ash-brown: superciliary line white: breast, belly, and vent, white, barred with ashy olive: flanks ashy olive, barred with white: quills sooty, the first longest: tail nearly square, consisting of twelve unspotted feathers, lighter beneath; the shafts white: bill with both mandibles somewhat rounded, slate-coloured, the lower mandible tinged with red: legs and feet yellow ochre: irides brown.

Total length, $12\frac{4}{10}$ inches; wing, from the carpal joint, $7\frac{4}{10}$ inches; tail, $2\frac{8}{10}$ inches; bill, $1\frac{7}{10}$ inch; to the corner of the mouth, $1\frac{8}{10}$ inch; tarsi, $1\frac{7}{20}$ inch; middle toe, including the nail, $1\frac{1}{4}$ inch; nail, $\frac{2}{10}$ inch; hind toe, $\frac{9}{20}$ inch; nail, $\frac{3}{20}$ inch; much curved. Male.

The females are not so large as the males; all our specimens are destitute of the bars on the feathers of the breast, belly, and under tail-coverts, one specimen only showing an indication of them; otherwise they resemble the males. The total length of a female specimen killed on Dog Island, was 12 inches; extent of the wings, 21 inches; bill, $1\frac{6}{10}$ inch; to the corner of the mouth, $1\frac{8}{10}$ inch; tarsi, $1\frac{7}{20}$ inch.

They vary considerably in size; our descriptions, and measures were taken from the largest specimens; the male was obtained at the Feejee Islands, the female from Dog Island, in the east of the Paumotu Group; others were killed at the Samoan Islands, the Society Islands, &c. And subsequently they were seen in small scattered flocks, as if migrating, on the 24th of April, at Mathew's Island, one of the Kingsmill Group. They utter a plaintive and rather musical whistle.

STREPSILAS INTERPRES.—(L.)

Tringa interpres. Wilson, Am. Orn., vol. vii. p. 32.
Strepsilas interpres. Richardson, Fauna Bor. Am., vol. ii. p. 371.
Strepsilas interpres. Audubon, Birds of America, vol. v. p. 231, pl. 323.

Collection Exp. Exp.

This species was found common on many of the islands of the Pacific Ocean, north and south of the Equator; but none were seen in full plumage, and all appeared to be migrating. At Mathew's Island, one of the Kingsmill Group, near the Equator, they were seen in large flocks on the 24th of April; nine were killed at one discharge of a small fowling-piece; and they were found to be exceedingly fat.

The specimen exhibited in the National Gallery, was killed in Callao, Peru, in the month of June; it was a female, and has but a few ferruginous and black spots on the scapulars.

CHARADRIADÆ.

CHARADRIUS PLUVIALIS.—(L.)

Golden Plover. *Charadrius pluvialis.* Wilson, Am. Orn., vol. vii. p. 71.
Golden Plover. Richardson, Fauna Bor. Am., vol. ii. p. 369.
Charadrius marmoratus. Wagler. Audubon, Birds of America, vol. v. p. 203.
Charadrius Virginianus. Borkh. Darwin, Zool. of the Voyage of the Beagle, pt. 3, p. 126.

Collection Exp. Exp.

Specimens were collected in almost every part of the Pacific and Indian Oceans, both north and south of the Equator, on islands which we visited; and frequently they came on board our ships at sea. They sometimes flew on board much exhausted, and after remaining a day or two, would start again on their perilous journeys.

Those we saw on the coasts of Chili and Peru, had the same voice and manners, as far as we could observe, as others which we saw on the Northwest Coast of America. At the various islands, in both the northern and southern hemisphere, they appeared to be strangers like ourselves; on their way north or south; although it is possible that some breed on the larger islands. We, however, never succeeded in finding their eggs, or birds that were too young to fly.

All that we saw on the islands of the Pacific lying north of the Equator, were in winter plumage, that is, without a black breast, in the months of November, December, and January; while those observed at the Feejee, Tonga, and Samoan Islands, which are south, were in the same state of plumage in May, June, and July; a few only being spotted with black on the belly, and an increased brilliancy of the golden spots on the back, during the later part of their sojourn, indicating the approach of the breeding season. Hence we

are led to the conclusion, that they are winter visitants to the islands and regions within the tropics only, that they migrate both ways, some north, and others south. And in this way we may account for their appearance there in almost every month of the year.

CHARADRIUS VOCIFERUS.—(L.)

Kildee. *Charadrius vociferus.* Wilson, Am. Orn., vol. vii. p. 73.
Kildee. Richardson, Fauna Bor. Am., vol. ii. p. 368.
Kildee. Audubon's Birds of America, vol. v. p. 207.

Collection Exp. Exp.

Specimens of this strongly characterized species were obtained from the interior of Oregon, and at Callao, in Peru. The alarm-note of the Peruvian bird, is precisely that of the North American "Kildee," and in all respects their habits are the same; the only specimen saved is a female, is somewhat less in dimensions than the North American specimens of the same sex, and had the eyelids yellow when fresh, and not red like the northern birds, a difference arising probably from age.

CHARADRIUS VANELLOIDES.—(Nob.)

PLATE LXVII. FIG. 1.

Collection Exp. Exp.

C. aspectu generali moribusque similis Vanello Cayensi et V. gallinaceo, quorum magnitudinem medianam haud multò excedit: vertice, strigâ suborbitali pectoreque nigris; strigâ auriculari, gutture, abdomine, femoribus tegminibusque caudæ albis: dorso flavescenti-brunneo, ad nucham perpallido, nigricante versus extremitatem scapularium ad modùm longarum et versus summitates nigras tectricum majorum alarum, penitùs purpureo delicatè nitente: alis calcare rudimentali ad articulum carpi; alio quoque calcare minore ad alterum articulum

instructis; illo denudato, hoc plumis contecto; fusco-sepiacis, subtùs pallidioribus; tegminibus subjacentibus albis; secundariis albis, apicibus nigris; tectricibus majoribus fusco-brunneis, ad apicem albis: caudâ modicè rotundatâ, duodecim constante plumis albis fasciâ nigrâ juxta apicem notatis: rostro palpebrisque diluto-flavis: iride flavâ: carunculâ anteoculari sanguineo-nitidâ: tibiis sanguineis, quas scutella fuliginosa cooperiunt.

In general aspect and habits, like the "Spur-wing Plovers," of South America, and Australia,* but not much more than half their size: crown, suborbital stripe, and breast, black: auricular stripe, throat, belly, thighs, and tail-coverts, white: back yellowish-brown; very pale on the back part of the neck, and darkening towards the ends of the scapulars, which are very long; and towards the ends of the greater wing-coverts, which are nearly black; the whole glossed with delicate purple: wings having a rudimentary spur on the carpal joint, and another, smaller, on the next joint; the first naked, the second covered by the feathers; they are of a dark sepia-brown colour, lighter beneath; under coverts white: secondaries white, with black tips; greater coverts dark brown, tipped with white: tail slightly rounded, consisting of twelve feathers, white with a black band near the tip: bill and eyelids pale yellow: irides yellow: wattle in front of the eye lake-red: legs lake-red, with sooty scales.

Total length, 11 inches; wing, from the carpal joint, $7\frac{9}{10}$ inches; bill, $\frac{17}{20}$ inch; to the corners of the mouth, $1\frac{1}{10}$ inch; tarsi, $1\frac{7}{10}$ inch; middle toe, including the nail, 1 inch; nail, $\frac{1}{4}$ inch; tail, $3\frac{3}{10}$ inches.

The two sexes are nearly alike in size and plumage, the male being somewhat darker in colour, and having the richer purple gloss.

They were obtained in the district of Argyle, New South Wales; were not plentiful, and seemed to prefer drier ground than the "Spur-wing Plovers" (*Vanellus gallinaceus*) of Jardine and Selby, which is supposed to be the Wattled Sandpiper, of Latham,† a common bird in moist meadows of the same district of country.

Charadrius vanelloides, has the same noisy and querulous manners

* *Vanellus Cayensis*, and *Gallinaceus*.

† Wattled Sandpiper. *Tringa lobata*. Latham, Gen. Hist. of Birds, vol. ix. p. 305.

as the Kildee of North America; they pursue grasshoppers and other insects at times on dry barren ground, and run with great speed before they start on the wing.

VANELLUS LOBATA.

Wattled Sandpiper. *Tringa lobata.* Latham, General History of Birds, vol. ix. p. 305.
Wattled Lapwing. *Vanellus gallinaceus.* Jardine and Selby, Illustrations of Orn., pl. 84.

Collection Exp. Exp.

These singular-looking birds were observed in abundance around shallow ponds near the Nepean River, in New South Wales, and in habits they are very like the Cayenne Plovers, or "El caravan," of the Patagonians, though not quite so noisy. They are seldom seen on very dry ground, in this respect differing greatly from the preceding Plover (*C. vanelloides*), which is sometimes found in the same district of country.

VANELLUS HELVETICUS.

Charadrius apricarius. Wilson, Am. Orn., vol. vii. p. 41.
Vanellus melanogaster. Richardson, Fauna Bor. Am., vol. ii. p. 370.
Charadrius Helveticus. Audubon, Birds of America, vol. v. p. 199.

Collection Exp. Exp.

Specimens in winter plumage were obtained about the middle of October, near the Bay of San Francisco, in California.

ŒDIENEMUS MAGNIROSTRIS.

Œdienemus magnirostris. (Geoff.) Temm., pl. col. 387.

Collection Exp. Exp.

Our imperfect copy of Temminck's *Planches Coloriées d'Oiseaux*, does not include this species, but the bird is too remarkable to be mistaken. It is common in the Philippine and Sooloo Islands, where we saw them frequently. The two sexes are alike in size and plumage; they are not gregarious, but are usually seen in pairs, or solitary; they have all the habits, even the shrill voice, of the "Oyster-catchers," (Genus *Hæmatopus*, L.,) and, like them, frequent only the shores where the water is salt; there they probe the sand and gravel beaches for crustacea, which seem to constitute a principal part of their food.

ŒDIENEMUS LONGIPES.

Œdienemus longipes.. (Geoff.) Temminck, pl. col. 386.

Collection Exp. Exp.

Common in the dry open woods of Argyle, New South Wales. It has the general habits of a Bustard, (Otis,) and cannot with propriety be arranged with the last named species.

GLAREOLA CUNEICAUDA.—(Nob.)

Plate LXVIII.

Collection Exp. Exp.

G. formâ generali aspectuque passeribus similis: capite, collo alarumque tegminibus pallidè fulvis: dorso obscuriori: plumis omnibus partium superiorum in medio sepiacis; scapularibus autem juxta apicem maculâ fulvâ cordiformi, nigro marginatâ notatis: gutture albo, ad oram nigricante: abdomine crissoque albis: alis suprà brunneis, subtùs dilutioribus; tectricibus majoribus, secundariis, remigibusque brunneis, ad margines lucidis: è remigibus primâ longissimâ; pogonio hujus externo albo; radiis trium primarum albis: caudâ rotundatâ; intermediis duabus plumis cæteras longitudine multò superantibus, undè cauda aspectum cuneiformem præ se fert; plumis medialibus brunneis, fulvo marginatis; reliquis obscurè æneis nigrisve, apice limboque albis: rostro ad basin flavo, ad extremitatem brunneo: tibiis flavis; unguibus brunneis. Mas.

In general form and appearance like a Sparrow: head, neck, and wing-coverts, pale tawny; the back darker; all the feathers of the upper parts are sepia-brown in the middle; the scapulars have a heart-shaped tawny spot margined with black, near their extremities: throat white, with an obscure blackish border: belly, and under tail-coverts white: wings brown above, lighter beneath; greater coverts, secondaries, and quills, brown, with a light margin; first quill longest, its outer web white; shafts of the first three quills white: tail rounded, the two centre feathers much longer than the rest, which gives the whole a cuneiform appearance; centre feathers brown, margined with tawny, the others dark brown, or black, margined and tipped with white: bill yellow at the base, brown at the end: legs yellow, claws brown.

Total length, $6\frac{2}{10}$ inches; wing, from the carpal joint, $4\frac{1}{10}$ inches; tail, to the end of the middle feathers, $2\frac{1}{10}$ inches; outer feathers, $1\frac{4}{10}$ inch; bill, $\frac{7}{20}$ inch; the commissure, $\frac{1}{2}$ inch; breadth, $\frac{3}{10}$ inch; tarsi,

$\frac{11}{20}$ inch; middle toe, including the nail, $\frac{15}{20}$ inch; nail, $\frac{2}{10}$ inch; hind toe, including the nail, $\frac{2}{10}$ inch; nail, $\frac{1}{10}$ inch. Male.

They were obtained on high sandy plains, at the Island of San Lorenzo, in Peru. Their flight is rapid, and dodging. On the ground, they have very much the appearance of Brown Larks, or Sparrows.

HÆMATOPUS PALLIATUS.—(Temm.)

Oyster-catcher. *Hæmatopus ostralegus.* Wilson, Am. Orn., vol. viii. pl. 64, fig. 2.
Oyster-catcher. *Hæmatopus palliatus.* Audubon, Birds of America, vol. v. p. 236.

Collection Exp. Exp.

We saw this species on both the east and the west coasts of South America. In North America it appears to be confined to the east coast; we neither saw nor heard of it on the west.

Specimens obtained in Brazil and Peru, have been carefully compared with another which was killed at Cape May, New Jersey. Not the slightest difference was discovered; and when alive, their voices and manners were also alike.

HÆMATOPUS ATER.

L'huêtrier noir. Hæmatopus ater. Vieillot, La Galerie des Oiseaux, tom. ii. p. 88, pl. 230.
Hæmatopus niger. Quoy et Gaimard; Freycinet, Voy. Autour du Monde, Zool., p. 129, pl. 34.
Hæmatopus Townsendii. Audubon, Birds of America, vol. v. p. 245, pl. 326.

Collection Exp. Exp.

This species was found plentiful in Orange Bay, Tierra del Fuego, and was seen on the West Coast of South America, at Valparaiso,

but was not observed by the Expedition any farther north. Young birds, until the first moult, have all the feathers of the body tipped with rufous.

HÆMATOPUS BACHMANII.

Hæmatopus Bachmanii. Audubon's Birds of America, vol. v. p. 243, pl. 325.

Collection Exp. Exp.

Sufficiently distinct from the last, and seems to replace it in the northern hemisphere; our specimen was obtained in Puget Sound.

NATATORES.

ANATIDÆ.

ANSER CANADENSIS.—(L.)

Canada Goose. *Anas Canadensis.* Wilson, Am. Orn., vol. viii. p. 53, pl. 67.
Canada Goose. Richardson's Fauna Bor. Am., vol. ii. p. 468.
Canada Goose. Audubon's Birds of Am., vol. vi. p. 168, pl. 396.

A few were seen on our journey from the Columbia River to California. Most of our journey was remote from extensive sheets of water, and as this species is more aquatic in its habits than the following, this may account for their being seen in the least numbers.

ANSER HUTCHINSII.

Hutchins's Barnacle Goose. *Anser Hutchinsii.* Richardson's Fauna Bor. Am., vol. ii. p. 470.
Hutchins's Barnacle Goose. Audubon's Birds of America, vol. vi. p. 198, pl. 377.

This Goose was found in great numbers on the flat and wet prairies of Upper California, where they arrive from the north about the middle of October. They are generally seen in large flocks by themselves, but sometimes are associated with Snow Geese, and the White-fronted Goose.

ANSER ALBIFRONS.

Anser albifrons. Bonaparte, Synopsis, p. 376.
Anser albifrons. Audubon's Birds of America, vol. vi. p. 209, pl. 380.
Anser albifrons. Richardson's Fauna Bor. Am., vol. ii. p. 466.

Collection Exp. Exp.

About the middle of October, vast numbers of White-fronted, or "Laughing Geese," arrive in Oregon and California, from the north. They are generally found on moist prairies, and feed almost entirely on grass; they soon become very fat, and are delicious eating. None were seen that were black, except in patches on the breast, that colour being probably the summer plumage of adult birds.

ANSER HYPERBOREUS.—(L.)

Snow Goose. *Anas hyperboreus.* Wilson, Am. Orn., vol. viii. p. 76.
Anser hyperboreus. Bonaparte, Synopsis, 376.
Anser hyperboreus. Snow Goose. Richardson, Fauna Boreali-Americana, vol. ii. p. 467.
Anser hyperboreus. Audubon's Birds of Am., vol. vi. p. 212, pl. 381.

It is quite impossible to convey to our readers an idea of the incessant clatter of sounds emitted by these, the two last-mentioned Geese, and the Storks or Sandhill Cranes,* when disturbed at night by some prowling wolf,—as they all roost on the ground in wet prairies. The old Snow Geese generally keep together, and their white plumage contrasted with the dark ground, presents the appearance of snow-banks. Rarely seen on the water; they remain all winter in California, and the southern parts of Oregon. When they first arrive from the North, they are very tame, allowing persons to approach very near, and a skilful rider on a horse is enabled to catch them

* Grus Canadensis, see page 213.

with a "lasso," (the noose used by the Californians for catching cattle and horses). By this process we have seen four that were taken in one afternoon by a Californian.

ANSER HAUAIËNSIS.—(Nob.)

Plate LXIX.

Collection Exp. Exp.

A. aspectu generali similitudinem aliquam Sinensis præ se ferens, cujus tamen dimensiones medianas non superat; propter longitudinem tibiarum similior "Bustardis" seu anatibus ex locis montanis ad Caput Horn.

A. rostro parvo, nigro: gutture, capite, collo postico nigris; colli lateribus fulvis: pectore, abdomine, hypochondriisque brunnescentibus; plumis ad basin cineraceis, fasciâ pallidâ, obumbratâ, umbrinâ juxta apicem notatis: ano crissoque albis: dorso saturatè umbrino, plumis brunneo marginatis: uropygio ferè nigro; tectricibus caudæ superioribus albis: caudâ nigrâ: tibiis fuscescentibus: digitis longis, semipalmatis: unguibus gracilibus, quorum medius acie internâ acutus: iride brunneâ.

The general aspect is somewhat that of the Chinese Goose, but it is not more than half its size,* and its long legs give it more the appearance of some of the "Bustard," or Upland Geese, of Cape Horn.

Bill small, black; throat, head, and back of the neck, black; sides of the neck tawny: breast, belly, and flanks, pale brown, the feathers being cinereous at the roots, and having a pale shaded umber bar near the tip: vent and under tail-coverts white: back dark umber, the feathers edged with brown: rump nearly black: upper tail-coverts white: tail black: legs dusky; toes long, semipalmate, the nails slender, the middle one sharp on the inner edge: irides brown.

Total length, $22\frac{1}{2}$ inches; bill, $1\frac{6}{10}$ inch; along the commissure,

* Chinese Goose. *Anas cycnoides*, L. Latham, Gen. Hist. of Birds, vol. x. p. 236. At page 238, he remarks: "Our late voyagers met with it, or at least one very like, at Owhyhee."

$1\frac{1}{2}\frac{8}{0}$ inch; tarsi, $2\frac{8}{1}\frac{}{0}$ inches; middle toe, $3\frac{1}{1}\frac{}{0}$ inches; nail, $\frac{1}{2}\frac{3}{0}$ inch; hind toe, $\frac{9}{1}\frac{}{0}$ inch.

They are not uncommon in ornithological collections, and have been frequently noticed by voyagers as the Chinese, or Kamtschatka Geese, but it is curious we have not been able to find it named by ornithologists.

We observed them on the volcanic mountains of the Island of Hawaii; they were generally in pairs at the season of our visit in the month of November, rarely, four or five were seen together feeding on the berries of a very abundant species of Vaccinum, growing on the old beds of lava; on these they became very fat, and were delicious eating; grass appeared, however, to be their ordinary food. We never saw them near water, which is scarce in those regions, our party being obliged to carry the necessary supply for the journey, in calabashes; but they are said to breed near shallow ponds, some few such occurring between the mountains.

What is most remarkable is the story related to us by natives, and which we have every reason to believe is a fact, that this Goose, which has the powers of flight which would enable it to move to as great distances as any others of the genus, is limited to the single island of Hawaii; rarely visiting any other islands of the group, although several are in sight. It bears confinement well, is hardy, and soon becomes domesticated. Its voice resembles that of the Snow Goose, *Anser hyperboreus*.

ANAS SUPERCILIOSA.—(L.)

Supercilious Duck. *Anas superciliosa.* Latham, General History of Birds, vol. x. p. 327.

Collection Exp. Exp.

This species was found abundant in the Bay of Islands, New Zealand, wherever there was fresh water; its habits and voice are much like the Mallards (*Anas Boschas*, L.), the female of which it closely resembles, but is darker coloured, and has a green instead of a blue speculum. In all the specimens obtained by the Expedition, the

superciliary line and cheeks are of a pale fawn-colour, and not white, as described by Dr. Latham.

We saw Ducks in most of the Polynesian islands, the identity of which are doubtful, but they resemble the above so closely, that for the present they are referred to this species. They are uniformly darker coloured, and want the white anterior margin to the speculum, which is conspicuous in the New Zealand birds; they also gradually decrease in size at each group of islands as we go north from Australia to the Equator; the specimens obtained at Upolu, one of the Navigators' Islands, being one-fifth less in size, but alike in plumage with others obtained in Australia. At the intermediate islands, Tongatabu, Feejee, and Tahiti, they were obtained, and we find vary in size only. North of the Equator they were not seen.

ANAS BOSCHAS.—(L.)

Mallard Duck. *Anas Boschas.* Auc.

Collection Exp. Exp.

Were observed in great numbers on the Northwest Coast of America, from Puget's Sound to San Francisco, in California. On fresh water only.

ANAS CLYPEATA.—(L.)

Shoveller Duck. *Anas clypeata.* Wilson, vol. viii. p. 65, pl. 67.

Collection Exp. Exp.

Good specimens of this beautiful Duck were obtained at the islands of Hawaii and Oahu; they appear to be identical with the Americans, and in this respect are worthy of attention, as but few of the birds found in that group of islands, have analogues on either of the shores of the Pacific Ocean opposite to them.

ANAS AMERICANA.

American Widgeon. *Anas Americana.* Wilson, Am. Orn., vol. viii. p. 86, pl. 69.
Mareca Americana. Stephens. Richardson, Fauna Boreali-Americana, vol. ii. p. 445.
Mareca Americana. Audubon's Birds of Am., vol. vi. p. 259, pl. 389.

Collection Exp. Exp.

Was frequently found on our route from the Columbia River to the Bay of San Francisco, in California, wherever we found fresh-water ponds.

ANAS CRECCA.

Green-winged Teal. *Anas crecca.* Wilson, Am. Orn., vol. viii. p. 101, pl. 60.
Anas (*Boschas*) *crecca,* var. (Forst.) American Teal. Richardson, Fauna Bor. Am., vol. ii. p. 443.
Anas Carolinensis. Audubon's Birds of Am., vol. vi. p. 281, pl. 392.

Collection Exp. Exp.

Common in Oregon and California. Our specimens are deficient of such characters as have been given by authors to separate the American and European as distinct species.

FULIGULA RUFITORQUES.

Ring-necked Duck. *Fuligula rufitorques.* Bonaparte, Journal Acad. Nat. Sciences, of Philadelphia.
Tufted Duck. *Anas fuligula.* Wilson, Am. Orn., vol. viii. p. 60, pl. 67.
Tufted Duck. Audubon's Birds of Am., vol. vi. p. 320, pl. 80.

Collection Exp. Exp.

We obtained specimens in Oregon, but they did not appear to be common there.

OIDEMIA FUSCA.

Oidemia fusca. (Fleming.) Velvet Duck. Richardson, Fauna Bor. Am., vol. ii. p. 449.
Velvet Duck. *Anas fusca.* Wilson, Am. Orn., vol. viii. p. 137.
Fuligula fusca. Audubon's Birds of Am., vol. vi. p. 332, pl. 81.

Collection Exp. Exp.

Common on the West Coast of America, as far north as visited by the Expedition; rare on the Coast of California.

OIDEMIA PERSPICILLATA.

Oidemia perspicillata. (Stephens.) Surf Duck. Richardson's Fauna Bor. Am., vol. ii. p. 449.
Surf Duck. *Anas perspicillata.* Wilson, Am. Orn., vol. viii. p. 4, pl. 67.
Fuligula perspicillata. Bonaparte, Synopsis, 339.
Fuligula perspicillata. Audubon's Birds of Am., vol. vi. p. 337, pl. 402.

Collection Exp. Exp.

Common on the West Coast of North America, with the last; and extends its migrations farther south. Never found but in the immediate vicinity of the sea, and as its name implies, generally in the surf.

MERGUS CUCULLATUS.—(L.)

Hooded Merganser. *Mergus cucullatus.* Wilson, Am. Orn., vol. viii. p. 79.
Hooded Merganser. Richardson, Fauna Bor. Am., vol. ii. p. 463.
Hooded Merganser. Audubon's Birds of Am., vol. vi. p. 406, pl. 413.

Collection Exp. Exp.

Observed from Puget's Sound, on the Northwest Coast of America, to San Francisco, in California. They may be said to be solitary in habits, not more than a brood usually remaining together. The young are covered with a rather coarse down, of a sepia-brown colour above, and white beneath; the cheeks tawny; bill green.

COLYMBIDÆ.

PODICEPS AURITUS.—(L.)

Eared Grebe. *Podiceps auritus.* Latham, General History of Birds, vol. x. p. 23.
Eared Grebe. Audubon's Birds of America, vol. vii. p. 322, pl. 482.

Collection Exp. Exp.

A specimen in immature plumage, being a female, or young male, was obtained in Oregon.

ALCADÆ.

MORMON CIRRATUS.

Tufted Auk. *Alca cirrata.* Latham, General History of Birds, vol. x. p. 57.
Mormon cirratus. Bonaparte, Synopsis, 249.
Mormon cirratus. Audubon's Birds of Am., vol. vii. p. 234, pl. 462.

Collection Exp. Exp.

Specimens of this singular bird were procured in Strawberry Bay, Northwest Coast of America, on the 29th of July. This is probably their southern limit in summer; farther north they are numerous. The feet, when living, are of a rich orange colour; the anterior portion of the upper mandible rich orange colour; base olive; lower mandible rich orange-red.

URIA ANTIQUA.—(Gm.)

Black-throated Guillemot. Audubon's Birds of America, vol. vii. p. 263, pl. 470.

Collection Exp. Exp.

A single specimen of a bird believed to be the Black-throated Guillemot, was obtained on the Northwest Coast of America. It differs from the figure given by Mr. Audubon, in not having a white line on the side of the neck.

URIA GRYLLE.—(L.)

Black Guillemot. *Uria Grylle.* Latham, General History of Birds, vol. x. p. 78.
Black Guillemot. Audubon's Birds of Am., vol. vii. p. 272, pl. 474.

Collection Exp. Exp.

Several specimens were obtained in Discovery Harbour, on the Northwest Coast of America, in May, at which time they were in summer plumage, and agree with Mr. Audubon's description, excepting the greater wing-coverts, which are black at the base, and tipped with white, which gives them an appearance of having two bars, one broad, and the other narrow, instead of a single white spot on the wings, as represented on his plate. This difference is constant in all our specimens, and is found to be the same in others obtained on the Columbia River, near its mouth.

CHIMERINA CORNUTA?—(Esch.)

Collection Exp. Exp.

On the Northwest Coast of America, a bird was obtained, which at first was supposed to be the Horn-billed Guillemot of Mr. Audubon,* *Cerorhynca occidentalis*, of Bonaparte's Synopsis, but on comparing it with the description, it is found to differ in many particulars, so that without seeing M. Escholtz's Zoological Atlas, we cannot determine the species.

Crown, back of the neck, wings, and tail, black: throat, breast, and flanks, drab-colour: belly and vent white: superciliary and cheek lines formed by elongated pointed white feathers: knob on the bill, and lower mandible, orange; a black line along the culmen; gonyx

* Birds of America, vol. vii. p. 264, pl. 471.

sharply angulate: legs orange-coloured; the toe-membranes and nails black.

Total length, $14\frac{3}{10}$ inches; wing, from the carpal joint, $7\frac{4}{10}$ inches; bill, $1\frac{4}{10}$ inch; to the angle of the mouth, $1\frac{7}{10}$ inch; elevation of the horn-like protuberance, $\frac{9}{20}$ inch; from the angle to the tip of the lower mandible, $\frac{7}{10}$ inch; width of the lower mandible, $\frac{7}{20}$ inch; tarsi, $\frac{19}{20}$ inch; inner toe, $1\frac{1}{4}$ inch; middle toe, including the nail, $1\frac{8}{10}$ inch; nail, $\frac{7}{20}$ inch; outer toe, rather shorter.

APTENODYTES PATACHONICA.—(L.)

Patagonian Pinguin. *Aptenodytes Patachonica.* Latham, General History of Birds, vol. x. p. 390.

Collection Exp. Exp.

Only one specimen of this bird was brought home. It was caught on the ice, in latitude 66° 52′ S., longitude 150° 25′ E. of Greenwich, on the 23d of January, 1840. Its stomach contained a quantity of basaltic pebbles, which were the first indication of Antarctic lands, at that time unknown.

APTENODYTES MAGELLANICA.—(Gm.)

Magellanic Pinguin. *Aptenodytes Magellanica.* Latham, Gen. Hist. of Birds, vol. x. p. 383.

Collection Exp. Exp.

Great numbers were seen at Orange Bay, and around Cape Horn. They swim so deep in the water, that the black stripe along the sides rarely shows above the water-line; it is very difficult to kill them with shot, and quite impossible to catch them with a boat.

A female, fresh killed, measured two feet three inches long, and

one foot eight and a half inches across the wings: irides reddish-brown. The males are larger, and the young are without the black water-line. Their voices are powerful, and can be heard at great distances, like that of the northern Loons (*Colymbus glacialis*).

APTENODYTES CHRYSOCOME?

Crested Pinguin. *Aptenodytes chrysocome.* Latham, Gen. History of Birds, vol. x. p. 385.

Collection Exp. Exp.

Not uncommon in the vicinity of Cape Horn. All the specimens, however, sent home by the Expedition, are destitute of the long golden crest-feathers; they have a superciliary yellowish-white line, the lengthened feathers of which are tipped with black, and terminate in a double occipital crest. We have no specimens of the true Chrysocome to compare this with, and we have some doubts of their identity.

APTENODYTES MINOR.

Little Pinguin. *Aptenodytes minor.* Latham, General History of Birds, vol. x. p. 387.
Korora of the natives.

Collection Exp. Exp.

Is quite common in the Bay of Islands, New Zealand; is always to be found on salt water, and most plenty near the sea. They swim with greater velocity beneath the surface of the water than they do on it, which is not very remarkable, or confined to this species, but common to the genus; they subsist mostly on fish, which have to be caught in their native element, so that the structure of the bird must be such as to enable it to pursue its prey with ease; and judging by the excessive fatness of all we killed, they are not often starved.

APTENODYTES FLAVILARVATA.—(Nob.)

PLATE LXX. FIG. 1.

Collection Exp. Exp.

A. subcristata; vittâ flavâ è rictu per oculos ad occiput usque pertingente, quæ verticem caputque anticum ad instar larvæ obtegit; partibus supernis diluto-cœruleo-griseis; infrà jacentibus albis: rostro pedibusque pallidè carneis: caudâ brevi, cuneatâ, viginti constante plumis. Rostrum mediocriter forte, commissurâ ferè rectâ, abruptiùs deorsùm ad rictum depressâ: mandibulâ superiori versùs extremitatem compressâ atque aduncâ; mandibularum acie introrsum valde reflexâ atque acutâ. Nares in cute desiccatâ haud discernendæ. Oculorum color aureo-flavus. Mandibula inferior compressa, modicè truncata, gonyde nonnihil rotundatâ, haud angulatâ. Regio ophthalmica plumulis brevibus aurantii coloris contecta; vertex cum fronte flavus, cujusque plumæ scapo nigro in appendiculam vibrissiformem elongato: colli latera diluto-brunnea: dorsum cæruleo-griseum, plumarum scapis fusco-brunneis: alæ concolores, aliquantulò obscuriores, ad utrumque marginem albo lineatæ, subtùs niveæ: pectus necnon et abdomen candida: cauda nigra, acuminata, rhachibus plumarum valdè complanatis, ejusdem ferè latitudinis cum ipsarum radiis: tibiæ rostrumque pallidè cariophyllacea sive carnea, unguibus rubris: mas feminæ similis secundum colorem plumarum; hæc dimensionibus major.

Subcrested; a yellow band crosses from the corner of the mouth to the occiput, which includes the eyes, and encloses the crown and front of the head in the form of a mask: upper parts light blue-gray; beneath white: bill and feet pale flesh-colour; tail short, cuneate, and consisting of twenty feathers: bill moderately strong, the commissure nearly straight, but turning rather abruptly downwards at the corners of the mouth; upper mandible compressed towards the extremity, and hooked, the edges much bent inwards and sharp; nostrils not perceptible in the dried skin; under mandible compressed, slightly truncate, gonyx slightly rounded: eyes

golden yellow: ophthalmic region covered with short orange-coloured feathers: crown and front yellow, the shaft of each feather black, and elongated to a bristle-like appendage: sides of the neck pale brown: back blue-gray, the feathers having dark brown shafts: wings the same colour as the back, somewhat darker, and margined on both edges by a white line; pure white beneath: breast and belly pure white: tail black, pointed, the shafts very flat, and nearly as broad as the webs: legs and bill light "pink" or flesh-colour: the nails red. Males and females alike in plumage, but differing in size, the females being largest.

Male: total length, $28\frac{6}{10}$ inches; bill, $1\frac{9}{20}$ inch; along the commissure, 3 inches; wing, along the front edge, $7\frac{9}{10}$ inches; foot, $4\frac{7}{10}$ inches; the fourth toe rudimentary, the nail $\frac{3}{10}$ inch long, slender and curved; the next toe shorter than the outer one.

Female: total length, $33\frac{6}{10}$ inches; bill, $2\frac{3}{10}$ inches; along the commissure, $3\frac{3}{10}$ inches; wing, along the front edge, $9\frac{2}{10}$ inches; tail, $2\frac{4}{10}$ inches; the outer feathers, 1 inch.

This species was found in great numbers at the Auckland Islands, in the month of March; on shore they were easily captured, and Dr. S. Holmes, of the U. S. Brig Porpoise, prepared the skins of a pair, which are now deposited with the National Collections in the City of Washington.

APTENODYTES LONGICAUDA.—(Nob.)

Plate LXX. Fig. 2.

Collection Exp. Exp.

A. gutture partibusque omnibus supernis nigris, subtùs albis: caudâ longâ, cuneatâ nigrâque, bis septem constitutâ plumis, quarum scapi validi, nigri atque elastici: rostrum validum, mediâ parte plumatum, commissurâ ferè rectâ; mandibulâ superiori depressâ, aliquantulùm aduncâ, margine bisulco præditâ; palato papillis acuminato-corneis in guttur tendentibus instructo; mandibulâ inferiori compressâ, paululùm truncatâ; naribus membranaceis, valvularibus in exemplaribus

desiccatis vix conspiciendis; rubido-brunneis: plumis corporis confertis, validis, nitidis, sesquiunciali longitudine, acuminatis; rhachibus admodùm latis complanatisque; albis: dorsi plumis ad summitates suas nigris, cæruleo marginatis: lanugine densissimâ plumarum omnium radices circumtegente, in partibus quæ subsunt albâ, in superioribus fuliginosâ: alæ exteriùs nigræ, posticè albo marginatæ, quavis plumâ limbo cæruleo ornatâ; interiùs vero albæ, anticè serie marginali plumarum ad instar squamarum instructæ, quarum plumularum pogonium tenue oculo haud armato discerni nequit: pedes colore carnis; unguibus validis, rotundatis, subobtusis, vix non rectis, rubescenti-brunneis.

Throat, and all the upper parts black; beneath white: tail long, cuneate, black, and consisting of fourteen feathers, which have strong, black, and elastic shafts: bill stout, feathered nearly half its length; commissure nearly straight; upper mandible depressed, and slightly hooked, and having a double cutting margin; palate strongly armed with corneous pointed papillæ, directed towards the throat; under mandible compressed, slightly truncated: nostrils membranous, valvular, and in the dried specimens scarcely discernible; colour reddish-brown: plumage dense, strong, and glossy, about one inch and a half long, pointed; the shafts very broad and flat, white on the breast, and black on the back: back feathers black at the extremities, and margined with blue; a very full coat of down envelopes the base of all the feathers, it is white on all the under parts, and fuliginous above: wings black outside, with a white hinder margin, each feather edged with blue; inside white, with a margin in front of black scale-like plumage, which has merely a slight marginal web, not distinguishable by the unassisted eye: feet flesh-coloured; the nails strong, rounded, rather blunt, and nearly straight; reddish-brown.

Total length, when killed, 31 inches;* extent across the wings, 23 inches; bill, $1\frac{5}{10}$ inch; along the ridge, $2\frac{7}{10}$ inches; along the commissure, $1\frac{5}{10}$ inch; and from the feathers on the commissure, and the under mandible, $\frac{6}{10}$ inch beyond the feathers of the chin: wings, 7 inches long, $2\frac{2}{10}$ inches wide at the elbow; foot, $4\frac{1}{10}$ inches; middle toe, including the nail, 3 inches; nail, $\frac{8}{10}$ inch; outer toe, $\frac{1}{2}$ inch

* The stuffed skin measures $33\frac{1}{2}$ inches.

longer than the inner; the fourth toe but little more than a rudiment, $\frac{1}{2}$ inch long including the nail, $\frac{2}{10}$ inch; tail, $6\frac{5}{20}$ inches; the outer feathers, 2 inches; the intermediate feathers regularly graduated. Male, obtained by Dr. S. Holmes, of the Brig Porpoise, latitude 64° 40′ S., and 103° 4′ E. from Greenwich.

These birds were not seen, excepting in the vicinity of ice in the Antarctic regions, south of the sixtieth degree of latitude. Their cry is loud, wild, and somewhat human in sound; they frequently followed our vessels, apparently from motives of curiosity, making the most rapid progress beneath the surface, and frequently leaping entirely out of water, and plunging again like porpoises, which, in marks and actions they closely resemble.

Penguins generally, when migrating, have all the manners and appearance of small Porpoises (*Delphini*); they pursue their course under water, rising to the surface to breathe, and frequently pitch themselves bodily into the air above, falling headforemost into the sea again. They generally migrate in flocks.

APTENODYTES MAGNIROSTRIS.—(Nob.)

Plate LXXI. Fig. 1.

Collection Exp. Exp.

A. rostro magno, juxta basin carnoso; mandibulâ superiori instructâ hamo brevi abruptâ usque ad apicem truncatum inferioris recipiendum: gonyde brevi, nigrâ; reliquo mandibulæ inferioris brunneo, recto, ad basin plumis fere nudato: supernè brunneo, subtùs albo: gutture diluto-brunneo, collum annulo brunneo circumdante: alis suprà nigris, infrà albis, radiis lineâ nigrâ instructis: pedibus cineraceis, unguibus magnis, validis, nigris, valdè incurvis: caudâ brevissimâ, quam sexdecim componunt plumæ, subtegminibus latentes.

Bill large, fleshy near the base; upper mandible with a short abrupt hook fitting to a truncation at the extremity of the lower mandible; gonyx short, black; the rest of the lower mandible brown; straight,

and almost bare of feathers at the base: above brown, beneath white; throat light brown; a brown ring encircling the neck: wings black above, white beneath, and having a black line on the radius: feet cinereous, the nails large, strong, black, and much curved: tail very short, consisting of sixteen feathers, which are hid by the coverts.

Total length, $25\frac{4}{5}$ inches; wing, along the front edge, $8\frac{2}{10}$ inches; bill, along the keel, $6\frac{6}{10}$ inches; commissure, $2\frac{7}{10}$ inches; middle toe, including the nail, 4 inches; nail, $\frac{8}{10}$ inch.

Obtained at Cape Horn; only one specimen having been procured, proves it a rare bird in that region.

APTENODYTES TÆNIATA.—(Nob.)

PLATE LXXI. FIG. 2.

Collection Exp. Exp.

A. desuper nigra, cærulescenti-griseo variegata: subtùs alba: gutture obscurè griseo: oculum utrumque maculâ albâ supernè posticèque notante: rostro gracili, flavo: pedibus flavido-carneis: caudâ longiusculâ, cuneatâ, quam sexdecim constituunt plumæ, quarum extimæ quaternæ sunt albo marginatæ.

Above black, mottled with blue-gray: beneath white: throat dark gray: a white spot above and behind each eye: bill slender; yellow: feet yellowish flesh-colour: tail rather long, cuneate; composed of sixteen feathers; the four outer ones edged with white.

General aspect and size that of the Long-tailed Penguin; but the tail is not so long, the wings longer, and the bill comparatively very long and slender; it has also much larger feet, and more slender nails.

Total length, $33\frac{9}{10}$ inches; bill, 2 inches; along the commissure, $3\frac{1}{2}$ inches; gonyx, $\frac{4}{5}$ inch; wings, $10\frac{2}{10}$ inches long; $2\frac{2}{10}$ inches wide;

tail, $3\frac{9}{10}$ inches; outer feathers, $2\frac{2}{10}$ inches; foot, $5\frac{2}{10}$ inches; middle nail, $\frac{8}{10}$ inch.

Found breeding in great numbers on Macquarie's Island, in the month of January, with the Crested Penguin (*A. chrysocome*), but in separate communities. Lieutenant Eld, who procured the only specimen brought home by the Expedition, says that the nests were so numerous as to cover many acres of ground, placed close together, and that the old birds were not willing or able to get out of the way, but would pick and bite the persons intruding, in such a manner as to render it necessary to kick them over. He thought it quite sufficient, after selecting specimens, to secure them by tying their legs, as they were unable to fly; but in this he was disappointed, for in passing through the surf, as the boats could not land, his prisoners all but one escaped, by swimming at a greater speed, although their legs were well secured, than their pursuers could follow them in boats.

PELICANIDÆ.

TACHYPETES AQUILUS.—(L.)

Collection Exp. Exp.

This remarkable bird seems to occupy the entire intertropical circuit of the globe: we saw them at all the coral islets which we passed or visited in the Pacific and Indian Oceans. It is regretted that we have not the means of comparing many specimens collected in different localities, (ours were all collected in the Pacific Ocean,) for notwithstanding the great similarity of appearance in those of the two great oceans, we think there is some difference in their habits.

On the east coasts of America, the Frigate Pelican, or "Man-of-War Hawk," is a common scavenger in almost every harbour; they frequent the landing-places near the markets, and are most numerous near the haunts of man; while in the Pacific and Indian Oceans we observed them most plentiful on uninhabited islands.

At Honden, or Dog Island, one of the Dangerous Archipelago, the numbers of birds of various kinds found breeding there on the 20th of August were so great, that our readers would doubt the enumeration, were it attempted. The nests were on the trees, bushes, ground, and even amongst the masses of broken coral thrown up by the sea. The birds were so unsuspicious, that in some instances we had to lift them off their nests with our hands, in order to examine the eggs; the confusion of sounds made the place a perfect Babel. The most conspicuous were "Frigate-birds," whose nests, constructed of a few sticks only, covered many of the trees by their numbers. The hoarse croaking and screaming as we disturbed them, was incessant. Both males and females were observed sitting on their *single* egg, which is of a bluish-white colour; the largest selected, measures $2\frac{8}{10}$ inches long, by $1\frac{8}{10}$ inch in diameter; the smallest, $2\frac{4}{10}$ inches long, by $1\frac{7}{10}$ inch in diameter. The males inflated their gular pouches to the size of a child's head, and flew with it inflated and pendant from their

necks, presenting a most singular appearance, the pouch being of a blood-red colour; the voice is guttural, loud, and hoarse; the old males are of a uniform dark plumage, and can always be distinguished by the long, pointed, and iridescent plumage of their backs. The females have a white breast. The young have, in addition to the white breast of the mother, a white head, which is usually tinged with ferruginous yellow; those in the nests are covered with a fine snow-white down, sometimes stained yellowish about the bill; the young feathers, as they shoot through the down on their backs, being large and dark-coloured, present a singular contrast to the white down.

Both sexes are very noisy when their nest is approached; they were so at Honden Island, and yet suffered us to take them off the branches of the trees, with our hands. From the weakness of their small feet and legs, when sitting on a branch, they are obliged to balance their bodies in a horizontal position.

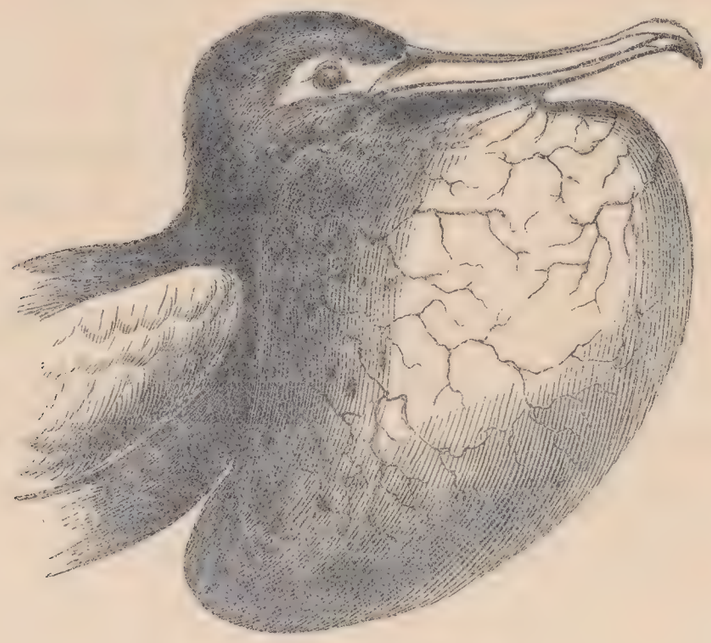
Frigate Pelicans were seen in the month of January on Enderby's Island, and as it was destitute of trees, they had constructed their rude nests on the ground. We are led to conclude, from the fact that fresh eggs being obtained in each place, and young birds found in various stages of growth, in the months of August and January, besides others seen at intervening periods, that they have no fixed season devoted to their broods in equatorial regions.

Mr. Audubon, who visited the breeding-places of the Frigate Pelicans, on the Florida Keys, which are coral islets analogous to those of the Pacific Ocean, did not observe the males there in the breeding season to have the habit of *inflating* the gular pouch; a habit which struck all of us who visited their nests on the coral islets of the Pacific Ocean, as very remarkable, from their singular and bloody appearance. And as he remarks, "they are extremely silent,"* we are led to believe there may be specific differences between the "Frigate-birds" of the two great oceans, which have not yet been detected. They are the most noisy, excepting the Terns (*Sterna*), of all the birds we saw breeding on the coral islets of the Pacific Ocean. Their incubating a single egg in regions near the Equator, and two or three, "more frequently the latter number," as Mr. Audubon remarks, in Florida, may be in consequence of the variation of climate, which limits them to one breeding season; but the bloody-looking pouch, and the scold-

* Birds of America, vol. vii. p. 15.

ing croak, would always, we should suppose, betray the identity to persons visiting their nests.

The subjoined wood-cut is from a sketch of a male Tachypetes obtained at Honden Island, in the Pacific Ocean; and represents the appearance of the gular pouch when inflated. The manner of inflation is like that of the *Cropper Pigeon*.



CARBO FUCOSUS.—(Nob.)

PLATE LXXII. FIG. 2.

Collection Exp. Exp.

C. capite, cervice, femoribusque fusco-olivaceis: genis, gutture, et partibus omnibus infrà jacentibus colli corporisque albis: alis cum scapularibus griseis, quavis plumâ margine fusco-olivaceâ circumdatâ: caudâ saturatè griseâ, ferè nigrâ; scapis nigris: rostro nigro, apice brunneo: pedibus nigris: iride viridi: loris cæruleis, guttâ flavâ rostri basin notante: rictu, mandibulæ inferioris basi ventriculoque gulari rubris.

Head, back of the neck, and thighs, dark olive-green: cheeks, throat, and all the under parts of the neck and body, white: wings and scapulars gray, each feather edged with dark olive-green: tail dark gray, nearly black; shafts black: bill black, with a brown tip: feet

black: irides green: lores blue, with a yellow spot at the base of the bill; corners of the mouth, base of the lower mandible, and pouch, red.

Total length, 2 feet $5\frac{1}{2}$ inches; extent of the wings, 3 feet $7\frac{1}{4}$ inches; wing, from the carpal joint, $10\frac{8}{10}$ inches; tail, $5\frac{4}{10}$ inches; tarsus, $1\frac{9}{10}$ inch; outer toe, $3\frac{1}{2}$ inches; bill, $2\frac{4}{10}$ inches; to the angle of the mouth, $3\frac{6}{10}$ inches.

In the Bay of Islands, New Zealand, we observed many Cormorants, including this and the following species, which we believe have not been noticed before. But a short residence and a wide field to investigate, prevented the kind of observation which is necessary for a correct knowledge of habits, &c. An adult specimen in full plumage will perhaps enable us to establish the existence of the species, while its history, like that of nine-tenths of the birds known, must remain for future investigators to develope.

CARBO PURPURAGULA.—(Nob.)

Plate LXXII. Fig. 1.

Collection Exp. Exp.

C. capite, collo corporeque nigris, olivaceo metallicè nitidis: alis caudâque nigris: rhachibus nigris: scapularibus atque alarum tectricibus purpuraceo-griseis, quavis plumâ nigro marginatâ; secundariarum radiis undulatis ad instar Ploti: rostro cœrulescenti-corneo; mandibulâ superiori brunnescenti: palpebris atque ventriculo gulari purpureis: iride viridi.

Head, neck, and body, black, with an olive-green metallic gloss: wings and tail black; shafts black: scapulars and wing-coverts purplish-gray; each feather edged with black: secondaries having their webs waved somewhat like the Darters (*Plotus*): bill bluish horn-colour, the upper mandible brownish: eyelids, and gular pouch purple: irides green.

Total length, 24 inches; wing, from the carpal joint, $10\frac{3}{10}$ inches; tail, $5\frac{3}{10}$ inches; the outer feathers, $3\frac{8}{10}$ inches; bill, $1\frac{8}{10}$ inch; to the corners of the mouth, $2\frac{6}{10}$ inches; tarsi, $1\frac{7}{10}$ inch; outer toe, 3 inches; nail, $\frac{3}{10}$ inch; hind toe, $1\frac{2}{10}$ inch; nail, $\frac{3}{10}$ inch.

The colour of this bird's gular pouch is so peculiar, that the specific name has been selected to separate it from the next species, or Yellow-throated Cormorant, which in many respects it resembles.

It was killed at Manua Bay, New Zealand, in the month of March, where they frequent the fresh-water, or brackish creeks.

CARBO FLAVAGULA.—(Nob.)

Plate LXXII. Fig. 3.

Collection Exp. Exp.

C. capite, collo, corpore fusco-sepiacis: alis saturatè griseis; primariis introrsùm valde incurvatis, nigris, virescenti-irideis: secundariis tegminibusque de more ad marginem nigricantibus: caudâ longâ, tenui, rotundatâ, plumis ad summitatem attenuatis acuminatisque, nigris; scapis nigris: rostro corneo: rostro ventriculoque gulari lætè flavis: iride brunneâ: pedibus nigris.

Head, neck, and body, dark sepia-brown: wings dark gray; the primaries very much curved inwards; black, with a greenish gloss: secondaries and coverts with the usual dark edges: tail long, slender, rounded; the feathers attenuated at the tip, and pointed; black; shafts black: bill horn-colour; lores and pouch bright yellow: irides brown: feet black.

Total length, $22\frac{6}{10}$ inches; wing, from the carpal joint, $9\frac{4}{10}$ inches; tail, $6\frac{4}{10}$ inches; outer feathers, $4\frac{2}{10}$ inches; bill, $1\frac{2}{10}$ inch; to the corners of the mouth, $3\frac{3}{10}$ inches; tarsi, $1\frac{3}{10}$ inch; outer toe, including the nail, $2\frac{7}{10}$ inches; nail, $\frac{3}{10}$ inch; inner toe, including the nail, $1\frac{3}{10}$ inch; nail, $\frac{4}{10}$ inch.

On a first view, this bird so closely resembles the last, that we hesitated to believe them different, but on careful comparison feel obliged, though reluctantly, to offer them as distinct species.

The specimens were procured at the Bay of Islands, New Zealand, where we found them more common than the Purple-throat Cormorant, which was also observed there.

PELECANUS TRACHYRHYNCHOS.

Rough-billed Pelican. *Pelecanus trachyrhynchos.* Latham, General History of Birds, vol. x. p. 408.
Pelecanus Americanus. Audubon's Birds of America, vol. vii. p. 20.
Pelecanus onocrotalus. Richardson's Fauna Bor. Am., vol. ii. p. 472.

Collection Exp. Exp.

Specimens were obtained at Gray's Harbour, on the Northwest Coast of America; and they were again met with in the Bay of San Francisco, in California. Young birds are not purely white like the old ones, which have black primary quills, but they have more or less brown in their plumage, particularly on the wings; they are also destitute of the elevated ridge of the upper mandible, which increases with their age, and is a strong characteristic of the species.

PELECANUS FUSCUS.—(L.)

Brown Pelican. *Pelecanus fuscus.* Audubon's Birds of America, vol. vii. p. 32.

Collection Exp. Exp.

Common on the Northwest Coast of America. We saw large flocks of them in the Bay of San Francisco, in California, and also in the Bay of Callao, in Peru. They may always be distinguished from all others of the genus, by their peculiar mode of plunging from the air

into the water, in pursuit of fish; an exploit common to them, but which we have never seen performed by the Rough-billed, or White Pelicans. Their migrations are usually made in flocks, which fly in diagonal lines.

PELECANUS PERSPICILLATUS.—(Temm.)

Collection Exp. Exp.

A specimen of this stately bird was obtained by the Expedition from Moreton Bay, New South Wales, through the instrumentality of William S. Macleay, Esq. It does not, we believe, occur so far south as Sydney; it is peculiarly characterized by having a line of feathers dividing the ophthalmic region from the base of the bill.

PELECANUS JAVANICUS.

Pelecanus Javanicus. Horsfield, Linnean Trans., vol. xiii. p. 197.

Collection Exp. Exp.

Several were seen in confinement at Singapore: they were very tame, and we understood were common among the neighbouring islands. The only specimens we procured, came from Malacca.

SULA FUSCA.—(L.)

Booby. *Pelecanus Sula.* Latham, General History of Birds, vol. x. p. 439.
Booby Gannet. *Sula fusca.* Audubon's Birds of Am., vol. vii. p. 57.

Collection Exp. Exp.

Brown Boobys were found breeding on nearly all the coral islands visited by the Expedition, while in the Pacific Ocean. Their nests

were constructed of sticks and weeds, on bushes, or low trees, and were generally found to contain but one egg, of a bluish-white colour. They take their food, which consists entirely of fish, by plunging after them like Terns (*Sterna*), and very frequently they are seen coursing the Ocean at great distances from land, which renders the following incident more remarkable. While exploring Enderby's Island, which is of coral formation, we found a full-plumaged bird of this species, that is, one having a white breast, which indicated it was several years old; it was at least a quarter of a mile from the shore; and on picking it up, we were surprised to find it had but one wing, the other having been by some accident, taken off close to the body; the wound was perfectly healed, the bird in excellent health, and very fat!—It was fed by its comrades, which were younger birds, as indicated by the brown plumage of their breasts, and they continued while we were near, to display all the careful anxiety of parents.

SULA PISCATOR.

Lesser Gannet. *Pelecanus Piscator*. Latham, General History of Birds, vol. x. p. 437.

Collection Exp. Exp.

This bird was first seen by the Expedition on the 20th of July, in latitude 13° 30′ 20″ S., and longitude 89° 25′ W. One month afterwards, they were found in great numbers on Honden Island, one of the most eastern of the Paumotu Group. They were sitting on a single egg each; one bird only having two eggs; they had no nest whatever, not even a cavity scratched in the sand. Flat, dry, sandy beaches were selected on the shores of the "lagoons," which are commonly found in coral islands; there, under some low bush, the female lays her egg on the bare ground, and is assisted by the male in the office of incubation. They remain very gravely at their stations, disregarding the enormous land-crabs, frigate-birds, or even man, who is the terror of most animals. We pushed many of the Fishing Gannets off their eggs, with the muzzles of our guns, to see if they had

more than one egg to each pair of birds; they fought and scuffled with the offensive weapon, but returned the moment it was withdrawn. One or two were sufficiently cunning, after a first attempt, to bite our hands in place of the gun-barrel. They hissed like the domestic Goose, and have besides a very coarse croaking voice.

The egg is $2\frac{6}{10}$ inches long, and $1\frac{8}{10}$ inch in diameter; equally rounded at both ends in some, while others are somewhat pointed at one end; the colour is bluish-green inside, and covered outside with a dry, rough, white coating, showing the colour of the interior through it. This outside coating is probably soft at first, because most of the eggs are coated more or less with coral sand, incorporated with the surface of the shell.

The young Fishing Gannets are covered with a fine white down, and when first hatched, resemble a powder-puff with a black handle; the latter being represented by their black bills. The feathers afterwards spring out of an ash-colour, and are not spotted with white like the Gannets of the north (*Sula bassanus*).

The seasons for incubation do not seem to be very regular. We found them sitting and hatching in August, at Honden Island, and again, they were just hatching at Enderby's Island on the 9th of January; the same was observed at other places at intermediate seasons. We never saw them construct a nest on trees, like the following species, nor are they so numerous, but are generally seen in the same parts of the great Pacific Ocean, lying between the Paumotu Islands and the coasts of Asia.

SULA RUBRIPEDA.—(Nob.)

Plate LXXIII.

Collection Exp. Exp.

S. utriusque sexûs plumis totius corporis candidis, primariis exceptis, secundariisque, necnon et serie primâ tegminum alarum majorum, quibus color brunneus, superficie autem canâ: caudâ cuneiformi, albâ: rostro profundè serrato, pallidè cæruleo, margine basali rutilo

et cute corrugatâ contecto: genis cæruleis: palpebris viridibus: iride brunneâ: ventriculo gulari intensè atro: pedibus nitidè miniatis: ungue digiti medii admodùm compresso, a latere incurvo, et profundè pectinato ad oram interiorem.

Plumage of both sexes pure white, excepting the primaries, secondaries, and first row of greater wing-coverts, which are dark brown, with a hoary surface: tail cuneiform, white (which distinguishes it from *L. piscator* at first sight, its tail being black): bill deeply serrated, of a pale blue colour, margined at the base by a bright red, and wrinkled skin: cheeks blue: eyelids green: irides brown: gular pouch intense black: feet bright vermilion-red; middle toe nail much flattened, curved laterally, and deeply pectinated on the inner edge.

Total length, $28\frac{1}{2}$ inches; extent of the wings, 59 inches; bill, $3\frac{2}{10}$ inches; commissure, $4\frac{1}{10}$ inches; tarsi, $1\frac{4}{10}$ inch; middle toe, including the nail, 3 inches; nail, $\frac{7}{10}$ inch; tail, $8\frac{1}{2}$ inches; outer feathers, $4\frac{3}{10}$ inches.

The young, when first hatched, are covered with a very white down; their first plumage is entirely brown, clouded with hoary; but the colour soon becomes lighter about the head, neck, breast, and tail; the neck and tail next become white, and finally the whole plumage, excepting the greater feathers of the wings; these changes requiring several years.

This is the most showy, as well as the most common species of "Booby," which occurs in the Pacific Ocean; it appears to be confined to the intertropical regions, but ranges from the shores of America to those of Asia.

At Honden Island, we found them on the 21st day of August, constructing their nests in great numbers on bushes from four to six feet above the ground; the materials used were weeds, and the structure was rude; they had not then began to lay their eggs, but were so unsuspicious that we took as many as were wanted, in different states of plumage, from the bushes with our hands; they sometimes fought rather than leave their nests, uttering a hoarse grunting cry, and biting severely, and aiming their blows at our eyes when not carefully guarded.

Out of many hundred pairs, at the above-named island, all preparing to raise broods, we saw but about a dozen with the pure white plumage which constitutes the dress of the mature birds.

At Enderby's Island we found them with nests on the bushes in the same manner as at Honden Island, but they were of a different material, dry sticks being used in the place of weeds: it was in the month of January. Some of the nests contained a new-laid egg; others contained young birds in various stages of growth. It was very rarely that we found two young birds or two eggs in the same nest. They were almost always single.

LARIDÆ.

STERNA FULIGINOSA.—(L.)

Sooty Tern. *Sterna fuliginosa.* Latham, General History of Birds, vol. x. p. 102.

Collection Exp. Exp.

Observed through all the Dangerous Archipelago, or Paumotu Group, and on most of the coral islands of the Pacific Ocean, breeding on those which are not inhabited by man.

At Honden Island, they were found in great numbers on the 21st of August, when their young were just able to fly; the nests were mere concavities in the coral sand, under low bushes. The number and proximity were such, that it required great care in walking, to avoid crushing both young and old birds under our feet.

The young are entirely brown; the dorsal feathers each tipped with yellowish-white; the outer tail-feathers not attenuated as in the adults.

Egg $2\frac{1}{10}$ inches long, by $1\frac{9}{10}$ inch in diameter; yellowish-white, with umber spots, some of which are very pale, and appear as if seen through the shell.

STERNA LUNATA.—(Nob.)

PLATE LXXIV. FIG. 1.

Collection Exp. Exp.

S. dorsi, alarum, caudæque plumis plumbeaceis: colli, gutturis, pectoris abdominisque albis: summo capite occipiteque nigris: fronte albâ, qui

color punctulatim supra oculos se extendit lunulamque efficit: rostro tibiisque nigris: alis subtùs albis; remige primâ longissimâ, rhachibus albis: radiis internis nigricantibus; margine pogonii interioris secundariarum albo: caudâ profundè furcatâ; plumis extimis admodùm cuspidatis, albis, pogonio interiori versus summitatem haud incluso, quod plumbi colorem imitatur: tegminibus subjacentibus albis; rhachibus albis.

Back, wings, and tail, plumbeous: neck, throat, breast, and belly, white: crown and occiput black: front white, extending in points over the eyes, and forming a lunule: bill and legs black: wings, beneath white; first quill longest; shafts white; inner webs nearly black; secondaries having the edge of the inner web white: tail deeply forked, the outer feathers very much pointed, white, excepting the inner web towards the tip, which is plumbeous; under coverts white; shafts white.

Total length, 13 inches; wing, from the carpal joint, $10\frac{3}{4}$ inches; tail, $6\frac{3}{8}$ inches; centre feathers, $2\frac{6}{10}$ inches; bill, $1\frac{6}{10}$ inch; to the angle of the mouth, $2\frac{1}{10}$ inches; tarsi, $\frac{6}{10}$ inch; middle toe, 1 inch; nail, $\frac{3}{10}$ inch.

Another specimen is a trifle larger, but as the labels have been removed, it is not certain, but the difference is probably sexual.

Our specimens were obtained on the 2d of September, at Vincennes Island, one of the Paumotu Group. In flight and general appearance, this species much resembles the Sooty Tern; but besides the difference of colour, the birds are less in size, and have proportionally longer tails.

STERNA ALBIFRONS.—(Nob.)

Plate LXXIV. Fig. 2.

Collection Exp. Exp.

S. dorso alisque nitidè griseis: fronte, gutture, collo, toto corpore, necnon et caudâ albis: vertice occipiteque nigris; rostro concolore: tibiis rubris, unguibus nigris: alis ad caudæ summitatem pertingentibus: inter primarias primâ longissimâ, radiis externis nigris: caudâ furcatâ, plumis omnibus, intermediis binis exceptis, acuminatis: scapis albis: iride brunneâ.

Back and wings pearl-gray: front, throat, neck, all the body, and tail, white: crown and occiput black: bill black: legs red; claws black: wings and tail equal; first primary longest, its outer web black: tail forked; all excepting the two centre feathers pointed; shafts white: irides brown.

Total length, $14\frac{1}{2}$ inches; wings, from the carpal joint, 11 inches; tail, 6 inches; centre feathers, $2\frac{6}{10}$ inches; bill, $1\frac{9}{20}$ inch; to the angle of the mouth, $2\frac{1}{10}$ inches; tarsi, $\frac{13}{20}$ inch; middle toe, including the nail, 1 inch; nail, $\frac{3}{10}$ inch.

Our specimen was killed at the Bay of Islands, New Zealand, in the month of March; they were then congregated in large flocks; six were killed at one discharge of a small fowling-piece. The species is offered with some doubts: it comes very near to *Sterna striata*, of Latham, which was found on the coast of New Zealand, by Dr. Forster, and as we think Dr. Latham's description originally was from a specimen in immature plumage, it is not improbable that *Sterna albifrons* is identical with it, but in adult and full dress.

STERNA ANTARCTICA.—(Nob.)

PLATE LXXV. FIG. 1.

Collection Exp. Exp.

S. dorso alisque pallidè grisescentibus: collo, gutture, corpore toto inferiori caudâque albis, grisescenti nonnihil tinctis: vertice, fronte, occipite nigris, eodem colore oculos includente: plumarum basi albâ: rostro gracili, modicè incurvo, penitùs coccineo: tibiis aurantiis: unguibus mediis nigris, reliquis aurantiis: remigum scapis albis; primâ e remigibus longissimâ, pogonio ejusdem exteriori nigro, reliquo quasi margaritæ colore imbuto, salvo margine exteriori: caudâ profundè furcatâ, albâ, extimis verò plumis grisescenti lavatis.

Back and wings light pearl-gray: neck, throat, all the under parts, and tail, white, with a slight pearly tinge: crown, front, and occiput, black; the base of the feathers white; the eyes included by the black: bill slender, slightly curved, entirely scarlet: legs orange; the middle claws black, all the others orange: first quill longest, and having its outer web black, all the rest pearly excepting the inner margins; shafts white: tail deeply forked, white, with a pearly tinge on the outer feathers.

Total length, 16 inches; wing, from the carpal joint, $12\frac{5}{8}$ inches; outer tail-feathers, $7\frac{2}{8}$ inches; middle feathers, 3 inches; bill, $1\frac{1}{2}\frac{3}{0}$ inch; to the angle of the mouth, $2\frac{3}{1\,0}$ inches; tarsi, $\frac{8}{1\,0}$ inch; middle toe, $1\frac{1}{1\,0}$ inch; nail, $\frac{3}{1\,0}$ inch.

This species is not uncommon along the southern coasts of South America; our specimens are from Orange Bay, Cape Horn. Its voice, size, and general habits, are so like its northern prototypes (*Sterna arctica* and *hirundo*), that it requires comparison to be convinced of the specific difference. But the intensely scarlet bill, which has not a black point like the northern bird, the lighter-coloured mantle, and the length of the tarsus, destroy their identity.

Young birds have the crown and occiput mottled black and white.

A Tern was seen from the U. S. Ship Peacock, in the month of March, at the sixty-eighth degree of south latitude, ninety-five degrees west of Greenwich. Its voice resembled *Sterna aranea*, but the bird appeared larger and had a longer tail, and was of a lighter colour. The weather was foggy, and the ship surrounded by icebergs.

STERNA RECTIROSTRIS.—(Nob.)

Plate LXXV. Fig. 2.

Collection Exp. Exp.

S. femina juvenis: collo, pectore, ventreque albis: vertice, occipite dorsoque brunneo variegatis: alis caudâque perobscurè brunnescenti-griseis: rostro tibiisque obscurè cæruleo-viridibus, hisce brunneo variis: alis subtùs albis; scapis concoloribus; radiis interioribus primariarum juxta scapos nigris, reliquo albo; pogonio exteriori fuscescenti-griseo; secundariis nigris albo marginatis, margine ad oram extimam angustato: tectricibus minoribus albis, quibus apex ex brunneo minimus, plumbeo colore plumas ad marginem anteriorem alæ sitas notante; scapularibus brunneo marginatis: caudâ furcatâ; rhachibus albis; apicibus necnon et radiis externis grisescenti-brunneis; radiis internis albis; iride brunneâ.

Neck, breast, and belly, white: crown, occiput, and back, mottled with brown: wings and tail very dark brownish-gray: bill and legs obscure blue-green, the latter being mottled with brown: wings white beneath; shafts white: inner webs of the primaries black next the shafts, the rest white; outer webs dark gray; secondaries black, margined with white; outer margin narrowest; lesser coverts white slightly tipped with brown; those along the anterior margins of the wings plumbeous: scapulars margined with brown: tail forked; the shafts white; tips and outer webs grayish-brown; inner webs white: irides brown.

Total length, $13\frac{1}{2}$ inches; wing, from the carpal joint, $12\frac{7}{10}$ inches; tail, $4\frac{8}{10}$ inches; middle feathers, $2\frac{9}{10}$ inches; bill, $1\frac{6}{10}$ inch; to the

angle of the mouth, $2\frac{1}{2}$ inches; tarsi, $\frac{19}{20}$ inch; middle toe, $1\frac{2}{10}$ inch; nail, $\frac{3}{10}$ inch. Specimen, a young female.

No specimen in adult plumage remains in the collection sent home by the Expedition, but many were observed in the various bays of the Feejee Islands, particularly Sandalwood Bay, where they were seen in large flocks. Its voice is harsh, and resembles that of *Sterna aranea*.

STERNA INCA.

Sterne des Incas. Sterna inca. Lesson, Voyage Autour du Monde, sur la Coquille, Zool., tom. i. pt. ii. p. 731, pl. 47.

Collection Exp. Exp.

This species seems to be restricted to the coast of Peru. We found them in great numbers at the Island of San Lorenzo.

STERNA ALBA.—(L.)

White Tern. *Sterna alba.* Latham, Gen. History of Birds, vol. x. p. 109.
Sterna candida, Gm.

Collection Exp. Exp.

This singularly beautiful Tern was observed on all the coral islands in the tropical regions of the Pacific Ocean; more rarely on the high islands. It alights on trees in deep shady forests, and follows pertinaciously all human intruders on these solitudes, uttering a rather melodious scream (for a Tern). Its snowy white plumage contrasts beautifully with the dark green foliage; a large, dark brown eye, adding much to its beauty.

The base of the bill is of a beautiful smalt-blue colour, changing to

violet; the tip is black: feet pale blue, having a deeply indented yellow membrane; the whole leg is unusually small and delicate: a few of our specimens have a pale rose tint.

From the singular mode of incubation, it was some time before we could discover the eggs; but having once made the discovery, we had frequent opportunities of verifying the observation. They lay but one egg, on the branch of a tree, which sometimes is but little larger than the egg itself; a knot or slight concavity, barely sufficient to keep it from rolling off, being all the protection it has when the bird leaves it. Both parents display great affection for their young, bringing small fish, which they take at sea by plunging, like their congeners, to feed them. We sometimes suspected them, from their actions, of catching spiders and insects, but have not been able by dissection to detect the remains of such in their stomachs.

The egg is large for the bird, being $1\frac{6}{10}$ inch long, and $1\frac{2}{10}$ inch in diameter; both ends nearly alike in form; colour brownish-white, sprinkled with threadlike spots, and patches of burnt umber; some very pale, as though seen through the shell. Where there are no trees, the points of coral rocks furnish a common substitute for the branch of a tree, selected in more favourable situations.

MEGALOPTERUS STOLIDA.

Noddy Tern. *Sterna stolida*, L. Latham, General History of Birds, vol. x. p. 104.

Collection Exp. Exp.

12582

A specimen was obtained on the Equator, at longitude 17° 44′ 30″, in the Atlantic Ocean; it was attracted by the light at night, while persons were trying the temperature of the water. The skin cannot be distinguished from many others obtained at the Dangerous Archipelago, New Zealand, and other parts of the Pacific Ocean, except that all our specimens, taken in the Pacific Ocean, are rather larger.

Unlike the Sooty Tern (*Sterna fuliginosa*), their presence does not indicate the vicinity of land. On the islands of the Pacific Ocean, they build their nests of sticks on trees; the eggs are brownish-white, spotted with reddish-brown, $2\frac{2}{10}$ inches long, by $1\frac{1}{2}$ inch in diameter.

MEGALOPTERUS TENUIROSTRIS.

Hirondelle de mer a bec grêle. Sterna tenuirostris. Temm., Planches Coloriée, 202.

Collection Exp. Exp.

15498

Obtained at Raraka, one of the Paumotu-Islands, in the Pacific Ocean. Their flight and general habits are like the Noddy, but they do not appear to wander so far from land, and are perhaps more restricted to the intertropical regions of the Pacific Ocean.

We found them breeding on Enderby's Island, on the 9th of January, in great numbers. They lay but one egg each, on the ground, without a nest, and generally under the edge of a rock or bunch of grass. The eggs are irregularly spotted with brown, rarely, are entirely white.

1 skin + specimen each (15498).

MEGALOPTERUS PLUMBEA.—(Nob.)

Plate LXXVI.

Collection Exp. Exp.

M. formâ generali gracilis elegansque; plumbea, juxta rostrum pallidissima: remigibus saturatissimè plumbeis, quarum prima pogonio externo nigro gaudet; secundariis ad apicem albis: caudâ furcatâ, rectrice extimâ breviore quam proxima quæ longissima est: superciliis nigris; palpebrarum dimidio postico albo: iride brunneâ: rostro tenui, nigro: faucibus salmonaceis: tibiis majusculis, nigris; membranis interdigitalibus integris flavescenti-albis: hallucis rudimentalis ungue recto.

General form light and graceful: lead-coloured; palest near the bill; quills darkest; the external web of the first quill black; secondaries tipped with white: tail forked, but having the exterior feathers shorter than the next, which are longest: brow black; the posterior half of the eyelids white: irides brown: bill slender, black; inside of the mouth salmon-yellow: legs rather large, black; the toe-membranes full, yellowish-white; hind toe rudimentary, and having a straight nail.

Total length, $10\frac{1}{2}$ inches; extent of the wings, $21\frac{1}{4}$ inches; wing, from the carpal joint, $7\frac{6}{10}$ inches; outer tail-feathers, $3\frac{5}{10}$ inches; second, $4\frac{1}{10}$ inches; middle, $2\frac{7}{10}$ inches; bill, 1 inch; to the corners of the mouth, $1\frac{4}{10}$ inch; tarsi, $\frac{19}{20}$ inch; middle toe, $1\frac{2}{10}$ inch; nail, $\frac{2}{10}$ inch; hind toe, including the nail, $\frac{1}{10}$ inch. Male. Both sexes alike in size and colour.

This plain but pretty bird was seen first at Honden Island, one of the Paumotu Group, on the 21st of August; their eggs were then found in slight concavities of the coral rocks, near the beach, without any nest, or lining materials; three eggs were found in one concavity; the whole number is probably four. The egg is $1\frac{1}{2}$ inch long, by $1\frac{1}{10}$ inch in diameter; largest at one end; both ends rounded: the

colour is that of pale cream, with irregular and scattered spots of sepia-brown, some of them very pale.

They were noisy, and anxious about their eggs, the voice much less harsh than that of most Terns: their flight is easy, and bat-like, from the great width of their wings and tail.

We saw this species now and then, though rarely, as we passed the equatorial regions of the Pacific Ocean, on, or near coral islets. When away from their eggs or broods, it is rare to hear them utter any cry.

The smallness of the hind toe, the ample membranes uniting the front ones, the slender bill, and broad tail with short exterior feathers, unites this species with the two foregoing, which seem to form a natural subdivision of the genus Sterna, and we have therefore placed them together in the genus *Megalopterus*, of Boie.

PHAETON ÆTHEREUS.—(L.)

Common Tropic Bird. *Phaeton æthereus.* Latham, Gen. Hist. of Birds, vol. x. p. 443.

Collection Exp. Exp.

Soon after the Expedition had left the Chesapeake Bay, and was on the Atlantic Ocean, in latitude 38° 13′ N., longitude 60° 35′ W. of Greenwich, we saw this species, which is the northern limit probably in its range. A few possibly breed on this part of our coast, as we have known young birds, just fledged, to have been killed on the Potomac, in the month of October.

In the Pacific Ocean, we saw them frequently, but not so far north; they were always seen in greatest abundance near "high islands;" they breed in holes made in the face of a rocky precipice, and where such places occurred within the tropics, we were sure to find them. In the mountainous regions of the Island of Tahiti, they are quite numerous; and formerly, collecting their long tail-feathers was a profession belonging to a particular class of the natives.

PHAETON PHÆNICURUS.—(L.)

Red-tailed Tropic Bird. *Phaeton phœnicurus.* Latham, General History of Birds, vol. x. p. 447.

Collection Exp. Exp.

This species abounds in the vicinity of the coral islands of the Pacific Ocean; we met with it less frequently near the "high islands."

They do not construct a nest, but lay their eggs on the ground in shallow holes, under coral ledges, or tussucks of grass; generally we found but one egg in a nest. They measure $2\frac{6}{10}$ inches in length, by $1\frac{8}{10}$ inch in diameter; they are pointed at one end, white, finely speckled, and clouded with chocolate-colour. Some we found were almost white.

The bills of old birds are scarlet, inclining to an orange-colour; irides brown: feet pale blue, with black toes. Some of the birds are silvery-white, and others of a pale rose-colour. The young birds have black, or pale blue-black bills; all the dorsal plumage barred with black; and beneath, they are white: the long middle feathers of the tail are at first white, but assume their bright red colour after the first moult.

An old male of a beautiful rose tint, suffered himself to be taken by hand off an egg. Many others were taken in the same manner, but they were generally females; this occurred at Honden Island, on the 21st of August, at which time we found fresh-laid eggs, and young just ready to fly, showing that their seasons of incubation are not regular.

Both this and the preceding species take their food, which is generally living fish, by diving after them, from the wing, in the same manner practised by the Terns.

LARUS ALBIPENNIS.—(Nob.)

Plate LXXVII.

Collection Exp. Exp.

L. formâ generali venustus elegansque: capite, collo, caudâ abdomineque albis: dorso nitidè griseo, quasi colore margaritæ: è primariis quinis primis albis, interiùs nigro marginatis; primâ autem tantùm secundum medianam longitudinem pogonii externi nigro marginatâ: rostro pedibusque coccineis: iride brunneâ; unguibus concoloribus.

General form light and graceful; head, neck, tail, and abdomen white; back delicate pearl-gray: first five of the primaries white, margined interiorly with black, the first one only margined with black on the outer web for half its length: bill and feet scarlet: irides brown: claws brown.

Total length, $16\frac{1}{8}$ inches: wing, from the carpal joint, $14\frac{1}{10}$ inches; tail, $4\frac{8}{10}$ inches; bill, $1\frac{4}{10}$ inch; to the angle of the mouth, $2\frac{3}{10}$ inches; tarsi, $1\frac{7}{20}$ inch; naked part of the leg above the heel, $1\frac{1}{10}$ inch; middle toe, $1\frac{8}{10}$ inch; nail, $\frac{7}{20}$ inch. Male. (U.S.N.M. 12807.)

The specimens were obtained in the month of May, on the coast of Chili; at that season the heads of all were white, slightly clouded, in some with pale lead-colour, which leads to the inference, that at other seasons their heads would be black, or dark lead-colour. Great numbers were around the shipping in the harbour of Valparaiso, which were very tame. This species is closely allied to *Xema cirrocephalum*, but is rather less in size, and may at once be distinguished by the first four quills, which are white; in *Xema cirrocephalum* they are black with white tips.

LARUS DOMINICANUS.—(Licht.)

Collection Exp. Exp.

Numerous on the Coast of Chili, particularly about the Bay of Valparaiso, in the month of May.

LARUS HÆMATORHYNCHUS.

Larus hæmatorhynchus. King, Zool. Journal, vol. iv. p. 103.
Larus hæmatorhynchus. Darwin, Zool. of the Voyage of H. M. Ship Beagle, pt. 3, p. 142.

Collection Exp. Exp.

Was seen occasionally from Cape Horn to Callao, on the Coast of Peru. Many specimens were obtained, which vary much in plumage; the males are about one-fourth larger than the females, and sometimes have the abdomen entirely white. The young birds are wholly fuliginous brown, with yellowish edges to the dorsal feathers, wing-coverts, &c. Tail, in all states of plumage, margined with white, which forms a conspicuous character.

LARUS (XEMA) CIRROCEPHALUM.

Xema (*Chroicocephalus*) *cirrocephalum.* G. R. Gray. Darwin's Zool. of the Voyage of the Beagle, pt. iii. p. 142.

Collection Exp. Exp.

They were killed on the west coast of South America, as far north as the Coast of Peru.

DIOMEDEA BRACHYURA.

Diomedea brachyura. Lesson, Traite d'Orn., p. 609.
Diomedea brachyura. Temm., Planche Eulum, 963, pl. col. 554.
Diomedea fusca. Audubon's Birds of America, vol. vii. p. 200, pl. 454.
Diomedea nigripes. Audubon's Birds of America, vol. vii. p. 198.
Diomedea exulans. Beechey, Narrative of a Voyage to the Pacific, and Baring's Straits, p. 236.

Collection Exp. Exp.

Numbers of the Short-tailed Albatross were observed by the Expedition, on the Northwest Coast of America; and they are believed to be common inhabitants of all the Pacific Ocean, north of the Tropic of Cancer. They vary as much, or perhaps more, than the Wandering Albatross (*D. exulans*), of the Southern Ocean, and require many years to attain to their perfect dress. The changes are regularly progressive: until the second year, their plumage remains of a dark sooty-brown colour; they have black feet, and dirty flesh-coloured bills (which become black when their skins are dried); in this state they pair, and raise their first young; after this, cloudy-white spots appear about the base of the bill, white spots over and under the eyes; their rumps then begin to show a conspicuous white spot, the bill turns yellow with a tinge of carmine, the tip bluish; the legs are then flesh-colour; and finally, the back, wings, and tail, become cinereous brown: rump, head, all the under parts, pure white; a white margin shows along the back edge of the wings as they fly; a cloudy-black spot generally remains in front of the eye. Thus in a few years, the plumage of the body is changed from nearly black to a pure snow-like white.

They are usually silent, but sometimes quarrel about the offal thrown from ships; then they "bray" in much the same tone as a Jackass.

They are easily caught with a hook and line, but owing to their thick plumage, and tenacity of life, it is difficult to kill them with shot.

On the 20th of December, we found them breeding on Wake's

Island. The single egg of each pair was laid on the ground in a slight concavity, without any lining material; both sexes take turn in the labours of incubation; and neither the male nor the female abandoned the nest on our approach, but walked round us in a very dignified manner, and made but a few demonstrations of defence with their beaks, when taken up in our arms.

The eggs are white, of an oblong figure, nearly alike at both ends, and measure $4\frac{2}{10}$ inches long, by $2\frac{6}{10}$ inches in diameter.

The two sexes are alike in plumage, and do not vary much in size, the males being rather the larger, as will be seen by the following table of dimensions made when the specimens were first killed; the sex was determined by dissection, afterwards.

	Length.		Extent of Wings.	
	Feet.	Inches.	Feet.	Inches.
Adult male, ...	2	10	7	3
Young male, ...	2	$8\frac{1}{2}$	7	3
Adult female, ...	2	$7\frac{3}{4}$	6	8
Young female, ...	2	$8\frac{1}{2}$	6	10
Young female, ...	2	$6\frac{3}{4}$	6	10

Captain Beechey saw them on his voyage to Baring's Straits, in latitude 25° N., longitude 163° 15′, on the 3d of June, 1826; he remarks: "On this day we observed an Albatross (*Diomedea exulans*), the first we had seen since quitting the coast of Chili. It is remarkable, that Captain King, in his passage to Kamtschatka, first met these birds within thirty miles of the same spot."*

It was not our fortune to observe more than this one species of Albatross in the North Pacific. It is subject to great variations of plumage, but is very distinct from those of the southern hemisphere. The Wandering Albatross (*D. exulans*), and the "Yellow Nose" (*D. chlororhynchos*), both of which, it has been asserted, were sometimes found in the northern oceans, we believe, on the contrary, to be en-

* Narrative of a Voyage to the Pacific, and Baring's Straits, p. 236; Am. edition, p. 205.

tirely restricted to the southern hemisphere, else they would sometimes be seen in crossing the intermediate tropical region. We saw both of the last-named species, and also the Sooty Albatross, as far south as latitude 57° 41′, which appeared to be nearly their southern limit. Their northern limits of migration on the Atlantic shores of South America, are somewhere about the River La Plata; and on the Pacific coasts, about the southern parts of Peru.

THALASSIDROMA FURCATA.

Plate LXXVIII.

Thalassidroma plumbea. Peale, MS.
Thalassidroma furcata. Hind's Voyage, H. M. S. Sulphur.

Collection Exp. Exp.

T. pallidè plumbeaceo-grisea; alis caudâque aliquantulò obscurioribus, in brunneum vergentibus: gutture, crisso, scapularium marginibus, rectricibusque lateralibus secundùm marginem exteriorem, albis: rostro pedibusque nigris: caudâ furcatâ: remigibus suprà nigris, subtùs pallidis, aut fermè albis.

Colour light leaden-gray; wings and tail somewhat darker, and inclining to brown: throat, under tail-coverts, margins of the scapulars, and outer margins of the lateral tail-feathers white: bill and feet black: tail forked: quills black above, light, or nearly white beneath.

Total length, $8\frac{4}{10}$ inches; extent of the wings, $15\frac{7}{10}$ inches; bill, to the corners of the mouth, $\frac{8}{10}$ inch; over the culmen, $\frac{1}{2}$ inch; tail, 4 inches; tarsi, $\frac{19}{20}$ inch; middle toe, 1 inch; nail, $\frac{2}{10}$ inch.

We observed them in numbers on the Northwest Coast of America, as far north as visited by our Expedition, but not farther south than the thirty-eighth degree of latitude. Our specimens were obtained on the coast of Oregon.

On reference to notes on this genus, made while in the southern hemisphere, it is found that in the month of March, in latitude 62° S., longitude 77° W. of Greenwich, the following entry was made: A very pretty species of Petrel has been following us for some days; its voice, size, and habits, are the same as Wilson's (*Thalassidroma Wilsonii*), but it is white beneath, from the breast down; the under parts of the wings are white, with a dark bar in the middle; about the bill (the bill itself?) red: breast black.* Another species, about the same in size, is of a pale lead-colour above, with a dark-coloured bar on the wings; all white beneath. Its actions are more sprightly and swallow-like; it flies round the ship, but does not so constantly follow the wake as the others.

We were not so fortunate as to obtain specimens of either of the last-noticed species, both of which are probably undescribed analogues of the northern *Thalassidromæ*. The first differs from *T. Oceanica*, in having a red bill, and the latter from *T. furcata*, in being white instead of lead-colour beneath. *T. Oceanica*, or a species bearing a strong resemblance to it, was seen in various parts of the temperate regions of the Pacific and Indian Oceans, but we did not succeed in obtaining specimens.

THALASSIDROMA LINEATA.—(Nob.)

Plate LXXIX.

Collection Exp. Exp.

T. suprà ferè nigra (obscurior quam T. Wilsoni): tegminibus caudalibus albis, strigâ tenui nigrâ in medio notatis: gutturis plumis albis, apicibus nigris: plumis pectoris, ventris, hypochondriorum anique albis, medio apiceque nigris: tectricibus sub alis albis, in medio nigris: remigum scapis nigris: rectricum scapis, intermediis nigris exceptis, dimidio basali albis: rostro tibiisque, membranis interdigitalibus inclusis, cærulescenti-nigris, haud maculatis: iride fusco-brunneâ.

Above nearly black (darker than T. Wilsonii): tail-coverts white, with a fine black line along the centre: throat-feathers white, tipped

* *Thalassidroma Oceanica?* Bonaparte, Zool. Journal, vol. iii. p. 89.

with black: feathers of the breast, belly, flanks, and vent, white, with black centres and tips: under wing-coverts white, with black centres: quill-shafts black: tail-shafts white for half their length, excepting the two centre shafts, which are black: bill and legs, including the toe-membranes, blue-black, without spots: irides dark brown.

Total length, $7\frac{3}{8}$ inches; extent of the wings, $15\frac{1}{2}$ inches; bill, $\frac{7}{10}$ inch; over the culmen, $\frac{9}{10}$ inch; tarsi, $1\frac{4}{10}$ inch; middle toe, including the nail, $1\frac{3}{10}$ inch; nail, $\frac{3}{20}$ inch; the toes remarkably broad and flattened; wings, when closed, projecting 1 inch beyond the tail; toes reaching $\frac{3}{4}$ inch beyond the tail. Male.

This bird was frequently seen within the torrid zone on the Pacific Ocean. A single specimen was obtained at the Island of Upolu, from a native, who represented to us that they bred in holes, very high up in the mountains.

PROCELLARIA BREVIPES.—(Nob.)

Plate LXXX.

Collection Exp. Exp.

P. capite alisque fuliginosis: dorso caudâque griseis: gutture, pectore ventreque, ave mortuâ, albis; salmonis colore, ave vivâ, tinctis: rostro nigro: pedibus pallidè carneis: digitis ad extremitatem nigris: iride brunneâ: pectore fasciâ interruptâ plumbeaceâ intersecto: caudæ plumis binis extimis grisescentibus, subtùs albis, rhachibus albis; reliquis brunneis: tegminibus alarum subjacentibus albis, minoribus vix non nigris.

Head and wings sooty-black: back and tail gray: throat, breast, and belly, white, tinged with salmon-colour when living, but changing to white after death: an interrupted plumbeous band crosses the breast: two outer tail-feathers light gray; white beneath; shafts white; all the others brown: under wing-coverts white, the lesser

ones nearly black: bill black: feet pale flesh-colour; the toes black at their ends: irides brown.

Total length, $10\frac{7}{10}$ inches; extent of the wings, $24\frac{1}{4}$ inches; bill, to the angle of the mouth, $1\frac{4}{10}$ inch; over the culmen, $\frac{19}{20}$ inch; middle toe, including the nail, $1\frac{3}{10}$ inch.

Two specimens were shot on the 21st day of March, in latitude 68° S., longitude 95° W. Their flight was very swift, wild, and irregular, and they evinced no partiality to the vicinity of the ship, although she was lying to, in a dense fog; a time when Petrels generally collected around us, to glean the offal thrown overboard. The labels having been displaced after the specimens were sent home, the sex cannot be given with certainty now, but they are believed to be males.

PROCELLARIA NIVEA.

Plate LXXXI.

Snowy Petrel. *Procellaria nivea.* Gm. Linn. Latham, General History of Birds, vol. x. p. 186.
Cook's Voyage, i. p. 33.
Procellaria nivea. G. R. Gray, Zool. of the Voyage of H. M. Ships Erebus and Terror, under the command of Capt. Sir James Clark Ross, R. N., F. R. S., pt. iii. pl. 34. (No description.)
Procellaria candida. Peale, MS.

Collection Exp. Exp.

The whole plumage, including the shafts of the quills and feathers, pure white, covering a plumbeous down: tail slightly rounded, consisting of twelve feathers; the under coverts even with, and sometimes exceeding the tail in length: bill black; compressed; point slender, the under mandible comparatively strong: irides brown: feet bluish flesh-colour; nails strong, flattened, the inner ones very sharp on the inner edge; first quill longest.

Total length, $14\frac{1}{10}$ inches; extent of the wings, 30 inches; tail, $4\frac{3}{10}$ inches; bill, to the angle of the mouth, $1\frac{4}{10}$ inch; along the culmen, $\frac{7}{10}$ inch; tarsi, $1\frac{4}{10}$ inch; middle toe, including the nail, $1\frac{6}{10}$ inch; nail, $\frac{4}{10}$ inch.

They inhabit the Antarctic regions. The specimens were obtained at latitude 64° S., and about 104° W. of Greenwich; we saw them only in the vicinity of ice, and whatever was thrown overboard from the ship, they flew round to pick up, like the Cape Pigeons (*Procellaria capensis*), but they were not so easily caught with a hook and line. A number of specimens were preserved; all are of the same unspotted white, and without any indication of black shafts to the feathers, which, having been given by Dr. Latham as a characteristic of the Snowy Petrel obtained by Captain Cook, we were induced from this and some minor differences, to consider the present as a distinct species, until the excellent plate representing it was published in the Zoological Atlas of the Voyage of H. M. Ships Erebus and Terror. Our drawing had been previously placed in the hands of the engraver; hence we feel obliged to apologize for repeating the representation of a known bird.

PROCELLARIA ROSTRATA.—(Nob.)

Plate LXXXII.

Collection Exp. Exp.

P. mas: capite, collo, dorso, alis caudâque sepiacis; gutture pectoreque item, sed pallidioribus: pectore infimo, abdomine anoque albis: alis dorso obscurioribus: remigibus fuliginosis: caudâ cuneatâ, tectricibus ipsius supernis brunneis, inferioribus albis, ad apicem brunnescentibus: laterum plumis pallidè brunneo marginatis: rostro profundè sulcato, fortissimo, nigro: iride brunneâ: pedibus, subtùs et internè, pallidè carneis, nigro marginatis: digitis membranâque interjacente, nigris, guttulâ exceptâ, carnei coloris, quæ ad basin membranæ interioris jacet.

Head, neck, back, wings, and tail, sepia-brown, lightest on the throat

and breast: lower part of the breast, belly, and vent, white: wings darker than the back; quills sooty: tail cuneate, upper coverts brown; lower coverts white, tipped with pale brown: feathers of the sides edged with pale brown: bill deeply furrowed, very strong, and black: irides brown: feet pale flesh-colour beneath, and on the inner side, but margined with black; toes and connecting membranes black, excepting a small flesh-coloured spot at the base of the inner membrane.

Total length, 16 inches; extent of the wings, $39\frac{1}{2}$ inches; bill, to the angle of the mouth, $1\frac{3}{10}$ inch; tail, $4\frac{7}{10}$ inches; tarsi, $1\frac{7}{10}$ inch; middle toe, $2\frac{1}{4}$ inches; nail, $\frac{4}{10}$ inch. Male.

At the Island of Tahiti, on mountains elevated about six thousand feet above the sea, this bird, with others of the same species, was found breeding in holes, during the month of October. They are decidedly nocturnal in their habits; a few only were now and then seen abroad in daylight: they sally forth from their subterranean abodes about sunset, to collect food for their young, far away at sea, being rarely found on the coast.

The specimen from which our drawing and the above description were taken, was procured by Mr. Dana, while on a most perilous excursion to the summits of the volcanic peaks of the island. The native who carried it finding its bite too severe to be often repeated, submitted the poor creature to a most cruel remedy, often practised by the island bird-catchers, which was to thrust the sharp point of the upper mandible through the lower, thus yoking it with its own jaw; in this state it was kept until the party reached the coast.

On the tops of the same mountains we saw a small species of Petrel, resembling *Thalassidroma Oceanica*,* rather larger, but all the under parts were white; they appeared to have their nests there, though we did not succeed in finding them, or in obtaining specimens of the birds, which were flying around us, and when shot, fell in dense forests, thousands of feet below us.

The background in the plate is from a sketch taken at the only native settlement we found in the interior, and represents the peaks which form the breeding-places of this and other oceanic birds, high

* Bonaparte, Zool. Journal, vol. iii. p. 89.

up on the River Popino. The figure of the bird is one-third less than the natural size.

PROCELLARIA PARVIROSTRIS.—(Nob.)

Plate LXXXIII.

Collection Exp. Exp.

P. mas: capite, collo, et partibus omnibus superioribus fusco-sepiacis: pectore, ventre anoque albis: crisso albo, ad marginem brunneo: plumis omnibus ad basin albis: rostro nigro, compresso necnon et debili: iride fusco-brunneâ: pedibus cœrulescenti-carneis, digitis omnibus ex articulo primo, nigris: alis quasi sesquipollice caudam longitudine superantibus.

Head, neck, and all the upper parts, dark sepia-brown: breast, belly, and vent, white: under tail-coverts white, margined with brown: all the plumage white at the roots: bill black, compressed, and weak: irides dark brown: feet bluish flesh-colour; the toes all black from the first joint: wings projecting, when closed, about $1\frac{1}{2}$ inch beyond the tail.

Total length, $14\frac{1}{2}$ inches; extent of the wings, 36 inches; wing, from the carpal joint, 11 inches; tail, $4\frac{1}{4}$ inches; bill, to the angle of the mouth, $1\frac{4}{10}$ inch; along the keel, $1\frac{1}{10}$ inch; tarsi, $1\frac{3}{10}$ inch; middle toe, including the nail, $1\frac{7}{10}$ inch; nail, $\frac{1}{4}$ inch. Male.

They breed on the coral islands. Our specimen was killed near Honden Island, of the Dangerous Archipelago, on the 20th of August. Its flight was rapid, and its general appearance and action, when flying, is like a Lestris. The figure is reduced to one-third less than the natural size.

PROCELLARIA GULARIS.—(Nob.)

Plate LXXXIV.

Collection Exp. Exp.

P. suprà cinerascenti-brunnea: caudâ pectoreque plumbeaceis: gutture, tectricibus sub alis, crissoque albis: primariis alulâque ferè nigris, scapis brunneis: caudâ subtùs pallidâ, plumis duabus extimis albo conspersis, omnium scapis suprà brunneis, subtùs albis: omnibus plumis ad basin albis: rostro cærulescenti-nigro, admodùm curvato, apice peracuto, prope summitatem valdè compresso.

Colour above cinereous brown: tail and breast plumbeous: throat, under wing-coverts, and under tail-coverts, white: primaries and spurious wings nearly black, with brown shafts: tail light beneath, the two outer feathers mottled with white; all the shafts brown above, and white beneath: the whole plumage white at the roots: bill blue-black, much curved, very sharp-pointed, and much compressed near the tip: first quill longest.

Total length, 13 inches; extent of the wings, 34 inches; wing, from the carpal joint, $10\frac{1}{2}$ inches; bill, 1 inch; nasal tubes, $\frac{3}{5}$ inch; tarsi, $1\frac{1}{5}$ inch; outer toe, $1\frac{6}{10}$ inch; tail, $3\frac{4}{10}$ inches; outer feathers, $2\frac{7}{10}$ inches. Male.

This bird was found amidst icebergs, buffeting the storm and fogs of the Antarctic regions. We saw but few of them, and obtained but a single specimen on the 21st of March, while the ship Peacock was enveloped in a fog; latitude 68° S., longitude 95° W. of Greenwich. Their flight was easy and not very rapid; they were silent, and alighted on the water to examine some slips of paper and chips, purposely thrown from the boat.

The two icebergs represented in the plate were sketched in the same region.

A

CATALOGUE OF THE SPECIMENS

OF

MAMMALIA AND BIRDS,

COLLECTED BY THE

SOUTH SEA SURVEYING AND EXPLORING EXPEDITION.

1838, 1839, 1840, 1841, 1842.

3/12

CATALOGUE OF SPECIMENS.

QUADRUMANA.

SIMIADÆ.

1. Stentor fuscus. (Geoff.) *Guariba*, or *Preacher Monkey*. Brazil.

LEMURIDÆ.

2. Galeopithicus variagatus. (Aud.) *Varied Colugo*. Singapore.

VESPERTILIONIDÆ.

3. Pteropus Javanicus. (Desm.) *Kalong*. Malacca.
4. Pteropus Keraudren. (Quoy and Gaimard.) *Beka*. Feejee Islands.
5. Pteropus Tonganus. (Quoy and Gaimard.) *Peka*. Tongatabu.
6. Pteropus Samöensis. (Peale.) *Pe'a*. Samoan Islands.
7. Pteropus vociferus. (Peale.) *Noisy Roussette*. Mangsi.
8. Dysopes aurispinosus. (Peale.) *Spinous-eared Bat*. Brazil.
9. Vespertilio semicaudatus. (Peale.) *Half-tail Bat*. Samoan Islands.
10. Vespertilio Californicus. (Bachman.) *Californian Bat*. California and Oregon.

FERÆ.

11. Lupus occidentalis. (Richardson.) *Brown Wolf.* Oregon.
12. Canis latrans. (Say.) *Prairie Wolf.* Oregon and California.
13. Canis Magellanicus. (Gray.) *Magellanic Wolf.* Tierra del Fuego.
14. Canis Azaræ. (Max.) *Chilian Fox.* Chili.
15. Vulpes Virginianus. (Gm.) *Gray Fox.* Oregon and California.

MUSTELIDÆ.

16. Viverra Malacensis. (Cuv.?) *Malay Civet.* Singapore.
17. Genetta vulgaris? (Cuvier.) *Genet.* Singapore.
18. Mustela erminea. (L.) *Ermine.* Oregon.
19. Mephites Americana. (Desm.) *Skunk.* Oregon.

URSINÆ.

20. Ursus ferox. (Lewis and Clarke.) *Grisly Bear.* (Scull.) California.
21. Procyon lotor. (L.) *Raccoon.* California.

DIDELPHIDÆ.

22. Didelphis elegans. (Darwin.) *Chilian Opossum.* Chili.
23. Gymnura Rafflesii. (Horsfield.) *Malayan Opossum.* Singapore.
24. Dasyurus macrourus. (Geoff.) *Native Cat.* New South Wales.
25. Dasyurus viverrinus. (Geoff.) *Native Cat?* New South Wales.
26. Dasyurus pencillatus. (Geoff.) *Brush Dasyurus.* New South Wales.

SORECIDÆ.

27. Scalops Townsendii. (Bachman.) *Oregon Mole.* Oregon.
28. Chrysochlorus Capensis. (Desm.) *Cape Chrysoclore.* Cape of Good Hope.

PHOCIDÆ.

29. Halichœrus antarcticus. (Peale.) *Antarctic Herring Seal.* Deception Island.
30. Stenorhynchus leptonyx. (F. Cuvier.) *Sea Leopard.* Antarctic Icebergs.

CETACEA.

DELPHINÆ.

31. Delphinus albimanus. (Peale.) *White-flipper Porpoise.* Coast of Chili.
32. Phocæna pectoralis. (Peale.) *Spotted-breast Grampus.* Hawaii.

UNGULATA.

PACHYDERMES.

33. Elephas Africanus. (Cuvier.) *African Elephant.* (Scull.) Cape of Good Hope.
34. Hippopotamus Capensis. (Desm.) *Hippopotamus.* (Sculls.) Cape of Good Hope.
35. Rhinoceros Africanus. (Cuvier.) *Rhinoceros Horns.* Cape of Good Hope.
36. Dicotyles labiatus. (Cuvier.) *White-lipped Pecary.* Brazil.

EDENTATA.

37. Dasypus minutus. (Desm.) Pichiy. Patagonia.
38. Orycteropus Capensis. (Geoff.) *Cape Ant-eater.* Cape of Good Hope.
39. Myrmecophaga tamandua. (Cuvier.) *Tamandua.* Brazil.
40. Echidna hystrix. (Home.) *Spiny Echidna.* New South Wales.
41. Ornithorhynchus paradoxus. (Blum.) *Water Mole.* New South Wales.

RUMINANTES.

42. Bos taurus. (L.) *Ox-horns.* Cape of Good Hope.
43. Antilope furcifer. (Sm.) *Antelope-horns.* Oregon and California.
44. Antilope cærulea. (Sm.) *Blaubockje.* Cape of Good Hope.
45. Antilope sylvatica. (L.) *Boschbock.* (Heads.) Cape of Good Hope.
46. Cervus Canadensis. (Briss.) *American Elk.* (Sculls.) Oregon and California.
47. Cervus Virginianus. (L.) *Virginia Deer.* (Sculls.) Oregon.
48. Cervus Lewisii. (Peale.) *Black-tail Deer.* Oregon and California.
49. Cervus campestris. (F. Cuvier.) *Guazuti.* Patagonia.
50. Mosthus Javanicus. (Pall.) *Napu.* Malacca.
51. Auchenia huanaca. (Gm.) *Guanaco.* Patagonia and Chili.

GLIRES.

52. Castor fiber. (L.) *Beaver.* (Sculls.) Oregon and California.
53. Fiber zibethicus. (L.) *Musk-rat.* Oregon.
54. Arvicola montana. (Peale.) *Mountain Field-mouse.* Shastee Mountains, Oregon.
55. Arvicola occidentalis. (Peale.) *Western Field-mouse.* Oregon.
56. Arvicola Oregoni. (Bachman.) *Oregon Field-mouse.* Oregon.
57. Arvicola Californica. (Peale.) *Californian Field-mouse.* California.
58. Mus exulans. (Peale.) *Wandering Rat.* Tahiti. Disappointment Island. Dog Island. Wake's Island. Hull's Island.
59. Mus Vitiensis. (Peale.) *Feejee Rat.* Feejee Islands.
60. Mus musculus. (L.) *Common Mouse.* Chili. Peru. New Zealand. Sandwich Islands. Oregon.
61. Mus Peruvianus. (Peale.) *Peruvian Mouse.* Callao.
62. Mus leucopus. (Rafin.) *White-footed Mouse.* Oregon and California.
63. Octodon Cummingii. (Bennett.) *Ratone.* Chili.
64. Neotoma Drummondii. (Richardson.) Astoria, Oregon.
65. Cricetodipus parvus. (Peale.) *Pouched Jumping-mouse.* Oregon.
66. Aplodontia leporina. (Richardson.) *Sewellel.* Oregon.
67. Arctomys guttatus? (Pallas. Richardson.) *American Sonslik.* Wallawalla, Oregon.

68. Sciurus fossor. (Peale.) *Burrowing Squirrel.* Oregon and California.
69. Tamias quadrivittatus. (Say.) *Four-banded Squirrel.* Oregon.
70. Sciurus affinis. (Raffles.) *Allied Squirrel.* Singapore.
71. Sciurus bivittatus. (Desm.) var. *Two-banded Squirrel.* Singapore.
72. Sciurus mollipilosus. (Bachman.) *Soft-haired Squirrel.* Oregon.
73. Pteromys genibarbis. (Horsf.) *Kechebu.* Singapore.
74. Lepus sylvaticus? (Bachman.) *Rabbit.* Oregon.
75. Lepus Townsendii. (Bachman.) *Oregon Hare.* Wallawalla, Oregon.
76. Lepus Nuttallii. (Bachman.) *Rocky Mountain Rabbit.* Oregon.
77. Lepus longicaudatus. (Gray.) *Long-tailed Hare.* Oregon and California.
78. Cavia Magellanica. (L.) *Magellanic Cavy.* Patagonia.
79. Macropus griceus. (Desm.) *Gray Kangaroo.* New South Wales.
80. Macropus pencillatus. (H. Smith.) *Mountain Kangaroo.* New South Wales.
81. Phalangista vulpina. (Desm.) *New Holland Opossum.* New South Wales.
82. Petaurus taguanoides. (Desm.) *Petaurine Opossum.* New South Wales.
83. Petaurus flaviventer. (Desm.) *Yellow-bellied Opossum.* New South Wales.
84. Petaurus Sciureus. (Desm.) *Squirrel Petaurus.* New South Wales.

BIRDS.

VULTURIDÆ.

1. Cathartes aura. (Ill.) *Turkey-buzzard.* Tierra del Fuego and Oregon.

FALCONIDÆ.

2. Polyborus Braziliensis. *Cara-cara.* Brazil, Patagonia, and Chili.
3. Milvago leucurus. (Gould.) *White-tailed Cara-cara.* Brazil, Patagonia, and Chili.
4. Milvago ochrocephalus. (Spix.) *Yellow-headed Cara-cara.* Brazil.
5. Milvago chimango. (Vieill.) *Chimango.* Chili and Patagonia.
6. Buteo varius. (Gould.) *Variable Buzzard.* Patagonia, Tierra del Fuego, and Chili.
7. Buteo solitaria. (Peale.) *Solitary Buzzard.* Hawaii.
8. Buteo borealis. (Latham.) *Red-tailed Hawk.* Oregon.
9. Buteo Ponticeriana. (Gm.) *Braminy Kite.* Malacca.
10. Buteo Ponticeriana. (Gm.) *Braminy Kite.* Brazil.
11. Circus assimilis. (Jard. and Selby.) *New Holland Harrier.* New South Wales.
12. Circus approximans. (Peale.) *Feejee Harrier.* Feejee Islands.
13. Circus cyaneus. (L.) *Common Harrier.* Oregon and California.
14. Circus cyaneus? (L.) *Butcher Hawk.* New South Wales.
15. Falco peregrinus. (Latham.) *Peregrine Falcon.* Oregon.
16. Falco peregrinoides? (Temm.) Argyle, New South Wales.
17. Falco cærulescens. (L.) *Bengal Falcon.* Malacca.
18. Falco sparverius. (L.) *Sparrow Hawk.* Brazil, Oregon, and California.
19. Falco ferox. (Peale.) *Fierce Hawk.* New Zealand.
20. Falco cenchroides. (Vig. and Horsf.) New South Wales.
21. Astur ferox. (Peale.) *Speckled Hawk.* New South Wales.

22. Astur fasciatus. (Vig. and Horsf.) *Fasciated Hawk.* New South Wales.
23. Astur Novæ-Hollandiæ. (Vig. and Horsf.) *White Hawk.* New South Wales.
24. Astur rufitorques. (Peale.) *Ring-necked Hawk.* Samoan Islands.
25. Astur bifasciata. (Peale.) *Two-barred Hawk.* Malacca.
26. Haliæetus leucocephalus. (L.) *American Eagle.* Oregon.
27. Pandion haliæëtus. (Lath.) *Fish-Hawk.* Oregon and California.
28. Elanus leucurus. (Bon.) *Mouse-Hawk.* New South Wales.

STRIGIDÆ.

29. Strix Americana. (Audubon.) *Barn Owl.* Oregon.
30. Strix lulu. (Peale.) *Samoan Owl.* Samoan Islands.
31. Strix flammea? *Barn Owl.* Brazil.
32. Strix ferruginea. (Pr. Max.) *Ferruginous Owl.* Brazil.
33. Otus brachyotus. (L.) *Short-eared Owl.* Sandwich Islands.
34. Noctua maculata. (Vig. and Horsf.) *Spotted Owl.* New South Wales.
35. Noctua sp. Malacca.
36. Noctua sp. New South Wales.
37. Noctua sp. Brazil.
38. Noctua venaticus. (Peale.) *Hunting Owl.* New Zealand.
39. Athene cunicularia. (Mollina.) *Coquimbo Owl.* Peru.
40. Athene hypugæa. (Bonaparte.) *Burrowing Owl.* Oregon.
41. Athene Patagonica. (Peale.) *Patagonian Owl.* Patagonia.
42. Bubo Virginianus. (Gm.) *Great-horned Owl.* Oregon.
43. Bubo strepitans. (Temm.) *Noisy Owl.* Malacca.
44. Bubo Lempyi. (Horsf.) *Lempy's Owl.* Malacca.
45. Bubo Ceylonensis. (Gm.) *Ketupba.* Malacca.

LANIADÆ.

46. Falcunculus frontatus. (Vieill.) *Frontal Shrike.* New South Wales.
47. Thamnophylus Vigorsii. (G. Such.) *Vigors' Bush-shrike.* Brazil.
48. Vanga destructor. (Temm.) *New Holland Butcher-bird.* New South Wales.
49. Agriornis striatus. (Gould.) Tierra del Fuego.
50. Lanius sp. *African Butcher-bird.* Cape of Good Hope.
51. Lanius sp. Malacca.
52. Lanius superciliosus. (Latham.) Malacca.
53. Tytira cinerea. (Vieill.) *Cayenne Shrike.* Brazil.
54. Tytira pitangui. (L. Latham.) *Pitangui.* Brazil.
55. Psaris Cuvierii. (Swainson.) Brazil.
56. Colluricincla maculosa. (Peale.) Feejee and Samoan Islands.
57. Dicrurus balicassicus. (L.) *Drongo Shrike.* New South Wales.
58. Dicrurus sp. *Drongo Shrike.* Malacca.
59. Edolius puellus? (Reinw. Temm.) *Blue Drongo.* Panay. Presented by Don Iñigo Gonzales de Azaola, of Manilla.
60. Ceblepyris cana. (Vieill.) *African Caterpillar-eater.* Cape of Good Hope.
61. Ceblepyris melanops. (Latham.) *New Holland Caterpillar-eater.* New South Wales.
62. Ceblepyris lineatus. (Swainson.) New South Wales.
63. Ceblepyris mentalis. (Vig. and Horsf.) New South Wales.
64. Ceblepyris sp. New South Wales.
65. Ocypterus mentalis. (Peale.) *Feejee Swallow Shrike.* Feejee Islands.
66. Ocypterus leucorhynchos. (Latham.) Mangsi.
67. Ocypterus albovittatus. (Velenciennes.) New South Wales.
68. Ocypterus superciliosus. (Peale.) New South Wales.
69. Tyrannula obscura. (Latham.) Hawaiian Islands.
70. Tyrannula Cooperii. (Nutt.) *Cooper's Fly-catcher.* Oregon.
71. Tyrannula sp. Tierra del Fuego.
72. Tyrannula albiceps. (D., Orb.) Chili.
73. Tyrannula sp. Tierra del Fuego.
74. Tyrannula sp. Brazil.

75. Tyrannula sp. Brazil.
76. Tyrannula sp. Brazil.
77. Tyrannula sp. Brazil.
78. Tyrannula sp. Peru.
79. Pyrocephalus coronatus. (Auc.) Brazil.
80. Pyrocephalus parvirostris. (Gould.) *Churrinche.* Peru.
81. Milvulus tyrannus. (L.?) *Fork-tail Fly-catcher.* Brazil.
82. Telophonus sp. Cape of Good Hope.

MERULIDÆ.

83. Turdus migratorius. (L.) *American Robin.* Oregon.
84. Turdus Falklandicus. (Quoy and Gaimard.) *Falkland Robin.* Orange Bay, Tierra del Fuego.
85. Turdus pallida. (Peale.) *Pale Thrush.* Chili.
86. Turdus Vanikorensis. (Quoy and Gaim.) *Vanikoran Thrush.* Samoan Islands.
87. Turdus Mindanensis. (Latham.) *Mindanao Thrush.* Malacca.
88. Turdus ochrocephalus. (Gm.) *Yellow-headed Thrush.* Malacca.
89. Turdus sp. *John Frederick.* Cape of Good Hope.
90. Chloropsis Malabaricus. (Jardine and Selby.) *Yellow-fronted Thrush.* Malacca.
91. Chloropsis Cochinchinensis. (Jardine and Selby.) *Black-chin Thrush.* Malacca.
92. Chloropsis gampsorhynchus. (Jardine and Selby.) Malacca.
93. Chloropsis Sonneratii. (Jardine and Selby.) Malacca.
94. Chloropsis (Turdus) viridis. (Horsf.) *Ijoan.* Malacca.
95. (Undetermined.) Malacca.
96. Cinclosoma punctatum. (Vig. and Horsf.) *Rock Thrush.* New South Wales.
97. Mimeta viridis. (Vig. and Horsf.) *Native Thrush.* New South Wales.
98. Mimus Peruvianus. (Peale.) *Peruvian Mocking-bird.* Peru.
99. Mimus Thenea. (Moll.) *Chilian Mocking-bird.* Chili.
100. Macronous ptilosus. (Jardine and Selby.) Malacca.
101. Chamæza meruloides. (Vigors.) Brazil.
102. Ixos atriceps. (Temm.) Malacca.
103. (Undetermined.) Brazil.

104. (Undetermined.) Brazil.
105. (Undetermined.) Malacca.
106. (Undetermined.) Malacca.
107. (Undetermined.) Malacca.
108. (Undetermined.) Malacca.
109. (Undetermined.) Malacca.
110. Thryothorus otatare. (Less.) *O. Tataré.* Tahiti, Carlshoff, Disappointment Islands.
111. Opetiorhyncus Patagonicus? *Patagonian Warbler.* Chili.
112. Opetiorhyncus Patagonicus. (Gray.) Tierra del Fuego.
113. Opetiorhyncus nigrofumosus. (Gray.) San Lorenzo, Peru.
114. Orthonyx Temminckii. (Vig. and Horsf.) New South Wales.
115. Pteroptochus megapodius. (Kittl.) *El Turco.* Chili.
116. Pteroptochus albicollis. (Kittl.) *Tapacolo.* Chili.
117. Pteroptochus paradoxus. (Gould.) Chili.
118. Scytalopus Magellanicus. (Latham.) Tierra del Fuego.
119. Troglodytes Magellanicus. (Gould.) Callao.
120. Troglodytes sp. Brazil.
121. Pitta versicolor. (Swainson.) New South Wales.
122. Pitta cyanoptera. (Temm.) Malacca.
123. Pitta coronata. (Peale.) Malacca.
124. *Speckled Thrush.* New South Wales.
125. Myothera. (Sp. undetermined.) Malacca.
126. Myothera. (Sp. undetermined.) Malacca.
127. Myothera. (Sp. undetermined.) Brazil.
128. Myothera. (Sp. undetermined.) Brazil.
129. Myothera. (Sp. undetermined.) Brazil.
130. Myothera. (Sp. undetermined.) Brazil.
131. Myothera. (Sp. undetermined.) Brazil.
132. Sericulus chrysocephalus. (Lewin.) *Regent-bird.* New South Wales.

SYLVIADÆ.

133. Saxicola œnanthe. (L.) *Wheat-ear.* Taken at sea, latitude 6° 50′ N., longitude 21° 38′ W.
134. Saxicola solitaria. (Lewin.) New South Wales.
135. Saxicola fumifrons. (Peale.) Peru.
136. Acanthiza albifrons. (Jard.) New South Wales.
137. Sialia arctica. (Sw.) *Arctic Blue-bird.* Oregon.
138. Sialia occidentalis. (Towns.) *Western Blue-bird.* Oregon.
139. Petroica multicolor. (Sw.) *Robin.* New South Wales.
140. Petroica Lathamii. (Vig. and Horsf.) *Plum-breast Robin.* New South Wales.
141. Petroica coccinea. (Peale.) New South Wales.
142. Petroica pusilla. (Peale.) Samoan Islands.
143. Malurus cyanea. (Latham.) *Superb Warbler.* New South Wales.
144. Malurus melanocephalus. (Latham.) *Orange-back Wren.* New South Wales.
145. Malurus malachurus. (Vig. and Horsf.) *Emu-bird.* New South Wales.
146. Sylvia sp. Brazil.
147. Sylvia sp. Brazil.
148. Sylvia sp. Brazil.
149. Sylvia sp. Brazil.
150. Sylvia sp. Brazil.
151. Sylvia sp. Brazil.
152. Sylvia sp. Brazil.
153. Sylvia sp. Brazil.
154. Sylvia sp. Brazil.
155. Sylvia sp. Brazil.
156. Zosterops dorsalis. (Vig. and Horsf.) New South Wales.
157. Zosterops flaviceps. (Peale.) Feejee Islands.
158. Regulus plumulosus. (Peale.) Chili.
159. Cyanotis omnicolor. (Swainson.) Chili.
160. Parus sp. Brazil.
161. Parus. *Minor Wren.* New South Wales.
162. Anthus pratensis. (Gm.) *Titlark.* Madeira.

163. Anthus furcatus. (D'Orb.) Chili, Cape Horn, and Patagonia.
164. Anthus correndera? (Vieill.) Peru.
165. Anthus sp. Malacca.
166. Anthus Australis? (Vig.) *Blue Mountain Lark.* New South Wales.
167. Anthus sp. Oregon.

AMPELIDÆ.

168. Pachycephala gutturalis. (Vig. and Horsf.) *Gray Robin.* New South Wales.
169. Pachycephala fuliginosa? (Vig. and Horsf.) New South Wales.
170. Pachycephala pectoralis. (Vig. and Horsf.) New South Wales.
171. Pachycephala olivacea. (Vig. and Horsf.) *Yellow Robin.* New South Wales.
172. Eopsaltria flavifrons. (Peale.) Samoan Islands.
173. Eopsaltria albifrons. (Peale.) Samoan Islands.
174. Eopsaltria icteroides. (Peale.) Samoan Islands.
175. Phibalura flavirostris. (Vieill.) Brazil.
176. Procnias ventralis. (Ill.) Brazil.
177. Calyptomina viridis. (Horsf.) Malacca.
178. Ampelis atropurpurea. (Max.) Brazil.
179. Pipra caudata. (Sw.) *Long-tailed Manakin.* Brazil.
180. Pipra militaris. (Shaw.) *Military Manakin.* Brazil.
181. Pipra cristata. (Sw.) *Short-tailed Manakin.* Brazil.
182. Pipra manacus. (Sw.) *Bearded Manakin.* Brazil.
183. Pardalotus punctatus. (Latham.) *Speckled Manakin.* New South Wales.
184. Pardalotus striatus. (Latham.) *Striped-headed Manakin.* New South Wales.

MUSCICAPIDÆ.

185. Seïsura volitans. (Vig. and Horsf.) *Dishwasher.* New South Wales.
186. Rhipidura flabellifera. (Latham.) *Fan-tailed Flycatcher.* New Zealand.

187. Rhipidura nebulosa. (Peale.) *Samoan Fantail.* Samoan Islands.
188. Rhipidura motacilloides. (Vig. and Horsf.) New South Wales.
189. Rhipidura rufifrons. (Latham.) *Brown Fantail.* New South Wales.
190. Myiägra plumbea. (Vig. and Horsf.) *Purple Wagtail.* New South Wales.
191. Monarcha niger. (Latham.) Tahiti.
192. Monarcha cinerea. (Peale.) Feejee Islands.
193. Megalophus regius. (Sw.) *Royal Tody.* Brazil.
194. Platyrhynchus albiventris. (Peale.) Samoan Islands.
195. Platyrhynchus Vanikorensis. (Quoy and Gaimard.) Feejee Islands.
196. Platyrhynchus Dupontii. (Griff.) Brazil.
197. Todus. Brazil.
198. Todus. Brazil.
199. Lepturus brevicauda. (Peale.) Peru.
200. Eurylaimus Horsfieldii. (Temm.) Malacca.
201. Eurylaimus nasutus. (Temm.) Malacca.
202. Muscicapa sp. Malacca.
203. Muscicapa colonus. (Vieill.) *Peruvian Flycatcher.* (Lath.) Brazil.
204. Muscicapa sp. } Philippine Islands. Presented by Don Iñigo
205. Muscicapa sp. } de Azaola, Manilla.

CORVIDÆ.

206. Corvus corax. (L.) *Raven.* Oregon.
207. Corvus corone. (Americana. Aud.) *Crow.* Oregon.
208. Corvus coronoides. (Vig. and Horsf.) *Crow.* New South Wales.
209. Corvus leptonyx. (Peale.) *Crow.* Madeira.
210. Corvus Hawaiënsis. (Peale.) Sandwich Islands.
211.
212. Barita tabicen. (Latham.) *Native Magpie.* New South Wales.
213. Barita strepera. (Latham.) *Hircine Magpie.* New South Wales.
214. Barita cinerea. (Peale.) Argyle, New South Wales.
215. Coracina scutata. (Latham.) Brazil.
216. Garrulus Stelleri. (Vieill.) *Steller's Jay.* Oregon.
217. Garrulus ultramarinus. (Bon.) *Ultramarine Jay.* Oregon.

218. Garrulus niger. (Thamnophilus niger. Such.) Brazil.
219.
220. Garrulus cyanopogon. (Pr. Max.) Brazil.
221. Psophodes crepitans. (Vig. and Horsf.) *Coachman.* New South Wales.
222. Gracula religiosa. (L.) *Minor.* Singapore.
223. Ptilonorhynchus MacLeayii. (Vig. and Horsf.) *Satin-bird.* New South Wales.
Ptilonorhynchus Smithii. (Vig. and Horsf.) *Varied Roller.* New South Wales.
224. Lamprotornis atrifusca. (Peale.) Samoan Islands.
225. Lamprotornis fusca. (Peale.) Samoan Islands.
226. Lamprotornis chrysonotis. (Sw.) Market of Rio Janeiro, from Africa.
227. Lamprotornis brevirostris. (Peale.) Samoan Islands.
228. Quiscalus Brewerii. (Aud.) *Brewer's Grackle.* Oregon and California.
229. Quiscalus ferrugineus. (L.) *Rusty Grackle.* Oregon and California.
230. Leistes niger. (Sw.) Chili and Tierra del Fuego.
231. Agelaius phæniceus. (L.) *Swamp Black-bird.* Oregon.
232. Agelaius gubernator. (Wagl.) *Red-wing Black-bird.* Oregon.
233. Icterus sulcirostris? (Spix.) Brazil.
234. Molothrus brevirostris? (Swainson.) Brazil.
235. Xanthornus flavas. (Gm.) Brazil.
236. Xanthornus Americanus. (Latham.) Brazil.
237. Amblyramphus ruber. (Gm.) Brazil.
238. Cassicus hæmorrhous. (Latham.) Brazil.
239. Cassicus cristata. (Azara.) Brazil.
240. Sturnella militaris. (Gm.) Patagonia and Chili.
241. Sturnella neglecta. (Audubon.) Oregon.

FRINGILLIDÆ.

242. Coccoborus. (Sw.) *Cærulean Grosbeak.* (Lath.) Brazil.
243. Coccoborus. Brazil.
244. Amadina Lathamii. (Gould.) *Diamond Sparrow.* New South Wales.

245. Amadina sp. New South Wales.
246. Carduelis Magellanica. (Vieill.) Brazil.
247. Linaria. "*Canary.*" Brazil.
248. Linaria. *Cape Canary.* Cape of Good Hope.
249. Tanagra Mexicana. (L.) *Black and Blue Tanager.* Brazil.
250. Tanagra vittata. (Temm.) Brazil.
251. Tanagra thoracica. (Temm.) Brazil.
252. Tanagra flamiceps. (Max.) Brazil.
253. Tanagra episcopus. (L.) *Bishop Tanager.* Brazil.
254. Tanagra archepiscopus. (Desm.) *Arch-bishop Tanager.* Brazil.
255. Tanagra Darwinii. (Bon.) *Darwin's Tanager.* Brazil.
256. Tanagra diademata. (Natt.) Brazil.
257. Tanagra citrinella. (Temm.) Brazil.
258. Tanagra violacea. (Latham.) *Golden Tanager.* Brazil.
259. Tanagra rufiventris. (Vieill.) *Red-bellied Tanager.* Brazil.
260. Tanagra tricolor. (Gm.) *Green-headed Tanager.* Brazil.
261. Tanagra viridis. (Vieill.) Brazil.
262. Tanagra cyanocephala. (Vieill.) *Blue-headed Tanager.* Brazil.
263. Tanagra Ludoviciana. (Wils.) *Louisiana Tanager.* Oregon and California.
264. Rhamphocelus coccineus. (Vieill.) *Brazilian Tanager.* Brazil.
265. Tachyphonus cristata. (L.) *Crested Tanager.* Brazil.
266. Tachyphonus auricapilla. (Max.) *Gold-crested Tanager.* Brazil.
267. Tachyphonus phœniceus. Brazil.
268. Pitylus picatus. (V.) *Magpie Shrike.* (Lath.) Brazil.
269. Euphonia nigricollis. (Vieill.) *Black-necked Tanager.* Brazil.
270. Aremon torquatus. (Vieill.) Brazil.
271. Pipillo arctica. (Sw.) *Arctic Ground-Finch.* Oregon and California.
272. Pipillo cinerea. (Peale.) *Chilian Ground-Finch.* Chili.
273. Fringilla Italiæ. (Vieill.) Cape de Verde Islands.
274. Fringilla (Niphæa) liciniata. (Peale.) Chili.
275. Fringilla Australis. (Latham.) Chili.
276. Fringilla temporalis. (Latham.) New South Wales.
277. Fringilla Savanna. (Wils.) Oregon.
278. Fringilla socialis. (Wils.) Oregon.
279. Zonotrichia. *Caffrarian Bunting.* Cape of Good Hope.
280. Loxia astrild. (Latham.) *Wax-bill.* Island of St. Helena.
281. Loxia curvirostra. (L.) *Cross-bill.* Oregon.
282. Passer. Malacca.

283. Erythrospiza frontalis. (Say.) Oregon.
284. Camarhynchus leucoptera. (Peale.) Peru.
285. Geospiza Peruvianus. (Peale.) Peru.
286. Geospiza prassinus. (Peale.) Feejee Islands.
287. Geospiza cyanovirens. (Peale.) Samoan Islands.
288. Psittirostra psittacea. (Latham.) *Parrot-bill.* Sandwich Islands.
289. Anthus furcatus. (D'Orb.) Patagonia and Tierra del Fuego.
290. Anthus correndera. (Vieill.) Peru and Chili.
291. Anthus correndera? (Vieill.) Peru.
292. Anthus pratensis. (Gm.) *Titlark.* Madeira.
293. Anthus spinoletta. (Bon.) *Brown Lark.* Oregon and California.
294. Anthus. Malacca.

MUSOPHAGIDÆ.

295. Phytotoma rara. (Mollina.) *Plant-cutter.* Chili.
296. Colius striatus. (Vail.) *Cape Coly.* Cape of Good Hope.
297. Corythaix Buffonii. (Edwards.) Cape of Good Hope.

BUCERIDÆ.

298. Buceros rhinoceros. (L.) *Rhinoceros Hornbill.* Singapore.
299. Buceros galeatus. (L.) *Helmet Hornbill.* Singapore.
300. Buceros albirostris. (Sh.) *White-beaked Hornbill.* Singapore.
301. Buceros nasutus. (Latham.) *Red-billed Hornbill.* Cape of Good Hope.
302. Buceros obscurus. (Peale.) *Dusky Hornbill.* Mindanao.

RHAMPHASTIDÆ.

303. Ramphastos dicolorus. (Wagl.) *Black and Yellow Toucan.* Brazil.
304. Pteroglossus aracari. (Vail.) *Aracari.* Brazil.
305. Pteroglossus maculatus. (Vieill.) *Spotted-bill Aracari.* Brazil.
306. Pteroglossus Azaræ? (Vail.) *Azara's Aracari.* Brazil.
307. Scythrops Novæ Hollandiæ. (Latham.) *Channel-bill.* Australia.

PSITTACIDÆ.

308. Psittacara nobilis. (Wagl.) *Noble Parrot Maccaw.* Brazil.
309. Conurus versicolor. (Vail.) *Wave-breasted Parrakeet.* Brazil.
310. Leptorynchus ruficaudus. (Lear.) Chilian Andes.
311. Palœornis Malacensis. (Vig.) *Malacca Ring-Parrot.* Malacca.
312. Palœornis. An undefined species, obtained at Rio Janeiro, locality uncertain.
313. Chrysotis menstruus. (Vail.) *Blue-headed Parrot.* Brazil.
314. Chrysotis cærulifrons. (Vail.) *Blue-faced Parrot.* Brazil.
315. Psittacus mitratus. (Max.) *Mitred Parrakeet.* Brazil.
316. Psittacus Luconensis. *Manilla-green Parrot.* Sooloo Islands.
317. Psittacus. Malacca.
318. Psittacus discurus. (Vieill.) *Racket-tail Parrot.* Cape of Good Hope.
319. Agapornis. (Selby.) Brazil.
320. Plyctolophus galeritus. (Vig. and Horsf.) *Helmeted Cockatoo.* New South Wales.
321. Cacatua minor. (Briss.) Sooloo Islands.
322. Calyptorhynchus funereus. (Shaw.) *Funereal Cockatoo.* New South Wales.
323. Calyptorhynchus Banksii. (Latham.) *Banksian Cockatoo.* New South Wales.
324. Calyptorhynchus Cookii. *Cook's Cockatoo.* New South Wales.
325. Nestor hypopolius. (Wagl.) *Southern Nestor.* New Zealand.
326. Trichoglossus Matoni. (Latham.) *Spotted Parrot.* New South Wales.
327. Trichoglossus concinnus. (Shaw.) *Crimson-fronted Parrakeet.* New South Wales.
328. Trichoglossus coccineus. (Shaw.) *Feejee Parrakeet.* Feejee Islands.
329. Trichoglossus Taitensis. (Gm.) *Tahitian Parrakeet.* Tahiti and Maitea.
330. Trichoglossus galgulus. (Latham.) *Sapphire-crowned Parrakeet.* Malacca.
331. Trichoglossus pusillus. (Vig. and Horsf.) *Small Parrakeet.* New South Wales.

332. Trichoglossus pipillans. (Latham.) *Blue-crested Parrakeet.* Samoan Islands.
333. Trichoglossus. *Red-fronted Parrakeet.* From Moreton Bay, New South Wales.
334. Platycercus scapulatus. (Vig. and Horsf.) *King's Parrot.* New South Wales.
335. Platycercus atragula. (Peale.) *Mangrove Lory.* Feejee Islands.
336. Platycercus splendens. (Peale.) *Splendid Lory.* Feejee Islands.
337. Platycercus flaviventris. (Vig. and Horsf.) *Green Lory.* New South Wales.
338. Platycercus Pennantii. (Latham.) *Pennantian Parrot.* New South Wales.
339. Platycercus Pennantii? (Smaller species.) New South Wales.
340. Platycercus erythropterus. (Gm.) *Crimson-winged Parrot.* New South Wales.
341. Platycercus eximius. (Shaw.) *Rose-hill Parrot.* New South Wales.
342. Platycercus Swainsonii. (Jardine and Selby.) *Blue-Mountain Parrot.* New South Wales.
343. Platycercus palliceps. (Lear.) *Pale-headed, Broad-tail.* New South Wales.
344. Pezoporus formosus. (Ill.) *Ground Parrot.* New South Wales.
345. Nanodes pulchellus. (Vig. and Horsf.) *Turcosine Parrakeet.* New South Wales.
346. Nanodes pulchellus? (Much smaller.) New South Wales.
347. Nanodes undulatus. (Vig. and Horsf.) *Undulated Parrot.* (Lath.) New South Wales.

PICIDÆ.

348. Picus Capensis. (L.) *Cape Woodpecker.* Cape of Good Hope.
349. Picus badius. (Raffles.) Malacca.
350. Picus puniceus. (Horsf.) Malacca.
351. Picus strictus. (Horsf.) *Strict Woodpecker.* (Lath.) Malacca.
352. Picus mentalis. (Temm.) Malacca.
353. Picus lineatus? (Latham.) *Lineated Woodpecker.* Brazil.
354. Picus galeatus. (Temm.) Brazil.
355. Picus melanochlorus. (L.) *Gold-crested Woodpecker.* Brazil.
356. Picus rubriventris. (Vieill.) Brazil.

357. Picus rubriventris ♀? Brazil.
358. Picus Harrisii. (Audubon.) *Harris's Woodpecker.* Oregon.
359. Picus torquatus. (Wils.) *Lewis's Woodpecker.* Oregon.
360. Picus ruber. (Gm.) *Red-breasted Woodpecker.* Oregon.
361. Picus minutus. (Latham.) *Minute Woodpecker.* Brazil.
362. Picus Buffonii. (Temm.) Brazil.
363. Hemicircus concretus. (Temm.) Malacca.
364. Chrysoptilus aurulentus. (Ill.) Brazil.
365. Chrysoptilus sp. Brazil.
366. Meiglyptes poicilophus. (Temm.) (Tristis. Raff.) Malacca.
367. Meiglyptes fusca. (Peale.) *Brown Woodpecker.* Malacca.
368. Chrysonotus tiga? (Horsf.) *Tiga Woodpecker.* Malacca.
369. Colaptes Mexicanus. (Sw.) *Red-shafted Woodpecker.* Oregon and California.
370. Bucco Lathamii? (Gm.) *Buff-faced Barbet.* Malacca.
371. Bucco Australis. (Horsf.) *Austral Barbet.* Malacca.
372. Bucco chrysopogon. (Temm.) Malacca.
373. Bucco versicolor. (Raff.) Malacca.
374. Bucco rubritorquis. (Peale.) Malacca.

CERTHIADÆ.

375. Sittella chrysoptera. (Latham.) *Orange-winged Nuthatch.* New South Wales.
376. Sitta punctata. (Quoy and Gaimard.) Bay of Islands, New Zealand.
377. Climacteris scandens. (Temm.) *Common Creeper.* (Lewin.) New South Wales.

CUCULIDÆ.

378. Cuculus albostrigatus. (Vig. and Horsf.) New South Wales.
379. Cuculus simus. (Peale.) Feejee Islands.
380. Cuculus cineraceus. (Vig. and Horsf.) New South Wales.
381. Cuculus inornatus. (Vig. and Horsf.) New South Wales.
382. Cuculus lucidus. (Latham.) New South Wales.
383. Cuculus variolosus. (Vig. and Horsf.) New South Wales.

384. Cuculus fucatus. (Peale.) *Painted Cuckow.* Mangsi.
385. Cuculus sp. Malacca.
386. Cuculus sp. Malacca.
387. Cuculus coromandus. (Latham.) *Collared Cuckow.* Malacca.
388. Cuculus sp. Malacca.
389. Coccyzus Cayenensis. (Latham.) *Cayenne Cuckow.* Brazil.
390. Coccyzus seniculus. (Latham.) *Mangrove Cuckow.* Peru.
391. Eudynamys Orientalis. (Latham.) *Eastern Black Cuckow.* Sooloo Islands.
392. Eudynamys Australis. (Sw.) *Southern Black Cuckow.* New South Wales.
393. Eudynamys cuneicauda. (Peale.) *Wedge-tailed Eudynamys.* Feejee Islands.
394. Centropus phasianus. (Latham.) *Pheasant Coucal.* New South Wales.
395. Centropus nigrifrons. (Peale.) *Black-Masked Coucal.* Sambuangu.
396.
397. Crotophaga lævirostra. (Sw.) *Thick-billed Ani.* Brazil.
398. Phœnicophæus Javanicus. (Horsf.) *Javan Malkoha.* Malacca.
399. Phœnicophæus tricolor. (Steph.) *Tri-coloured Malkoha.* Malacca.
400. Phœnicophæus Sumatranus. (Raff.) *Sepando.* Malacca.
401. Phœnicophæus nigriventris. (Peale.) *Black-bellied Malkoha.* Malacca.
402. Anadænus chlorophæus. (Raff.) (Rufescens. Sw.) *Bootboot.* Malacca.
403. Anadænus ruficauda. (Peale.) *Rufus-tailed Anadænus.* Malacca.
404. Indicator major. (Val.) *Great Honey-guide.* Cape of Good Hope.

MELIPHAGIDÆ.

405. Meliphaga Novæ-Hollandiæ. (Latham.) *Jar-bird.* New South Wales.
406. Meliphaga Australasiana. (Shaw.) *Horse-shoe Bird.* New South Wales.
407. Meliphaga auricomis. (Latham.) *Tufted-eared Honey-eater.* New South Wales.

408. Meliphaga chrysotis. (Lewin.) *Yellow-eared Honey-eater.* New South Wales.
409. Meliphaga leucotis. (Latham.) *White-eared Honey-eater.* New South Wales.
410. Meliphaga carunculata. (Latham.) Tonga, Feejee, and Samoan Islands.
411. Meliphaga cincinnatus. (Latham.) *Poë.* Bay of Islands, New Zealand.
412. Meliphaga Dumerillii. (Lesson.) *Guy-mocco.* Bay of Islands, New Zealand.
413. Meliphaga cucullatus. (Latham.) *Swit-swat.* New South Wales.
414. Myzantha flavirostris. (Vig. and Horsf.) *Bell-bird.* New South Wales.
415. Anthochæra carunculata. (Vig. and Horsf.) *Wattle-bird.* New South Wales.
416. Anthochæra phrygia. (Lewin.) *Mock Regent-bird.* New South Wales.
417. Anthochæra mellivora. (Latham.) *Cookaycock.* New South Wales.
418. Tropidorhynchus corniculatus. (Latham.) *Leatherhead.* New South Wales.
419. Hæmatops lunulata. (Gould.) *Black-cap.* New South Wales.
420. Ptiloturus fasciculatus. (Latham.) *Oo.* Hawaii.
421. Ptiloturus Capensis. (Vail.) *Long-tail Sugar-bird.* Cape of Good Hope.
422. Entomiza angustipluma. (Peale.) Hawaii.
423. Entomiza olivacea. (Peale.) Samoan Islands.
424. Acanthorhynchus tenuirostris. *Slender-billed Honey-sucker.* New South Wales.
425. Arachnothera chrysogenys. (Temm.) Malacca.
426. Arachnothera inornata. (Temm.) Malacca.
427. Myzomela cardinalis. (Vig. and Horsf.) *Little soldier.* New South Wales.
428. Myzomela jugularis. (Peale.) *Red-throated Myzomela.* Feejee Islands.
429. Myzomela nigriventris. (Peale.) *Black-belly Myzomela.* Samoan Islands.

CINNYRIDÆ.

430. Melithreptes vestiaria. (Sh.) *Apani.* Sandwich Islands.
431. Cinnyris chalybea. (L.) Cape of Good Hope.
432. Cinnyris amathistina. (Vieill.) Cape of Good Hope.
433. Cinnyris famosa. (Latham.) Cape of Good Hope.
434. Cinnyris. (Undetermined.) Cape of Good Hope.
435. Diceum sanguinea. (Latham.) *Olokela.* Hawaii.
436. Diceum virens. (Latham.) *Alauvi.* Hawaii.
437. Diceum gularis. (Lewin.) New South Wales.
438. Hemignathus lucidus. (Licht.) *Half-bill.* Hawaii.
439. Hemignathus lucidus? *Half-bill.* Hawaii.
440. Hemignathus obscurus. (Latham.) *Half-bill.* Hawaii.
441. Promerops erythrorhynchus. Cape of Good Hope.

TROCHILIDÆ.

442. Trochilus auritus. (Vieill.) ♂. ♀. *Violet-eared Humming-bird.* Brazil and Chili.
443. Trochilus petasophorus. (Neuw.) ♂. ♀. *Violet-tufted Humming-bird.* Brazil.
444. Trochilus Delalandii. (Vieill.) *Delaland's Humming-bird.* Brazil.
445. Trochilus sephanoides. (Less.) ♂. ♀. *Violet-crowned Humming-bird.* Chili.
446. Trochilus magnificus. (Vieill.) *Magnificent Humming-bird.* Brazil.
447. Trochilus prasina. (Less.) *Golden-green Humming-bird.* Brazil.
448. Trochilus cyaneus. (Vieill.) *Blue and Green Humming-bird.* Brazil.
449. Trochilus albiventris. (Less.) *White-bellied Humming-bird.* Brazil.
450. Trochilus albicollis. (Vieill.) *White-throated Humming-bird.* Brazil.
451. Cyanthus amethystinus. (Latham.) *Amethystine Humming-bird.* Brazil.

452. Cyanthus Keinerii. (Less.) *Keiner's Humming-bird.* Chili?
453. Cyanthus sapphirinus. (L.) ♂. ♀. *Sapphire-throated Humming-bird.* Brazil.
454. Cyanthus frontalis. (Latham.) *Blue-fronted Humming-bird.* Brazil.
455. Cyanthus cyanogenys. (Less.) ♂. ♀. *Neuvied's Humming-bird.* Brazil.
456. Cyanthus gigas. (Vieill.) *Gigantic Humming-bird.* Chili.
457. Cyanthus macrourus. (Gm.) *Swallow-tailed Humming-bird.* Brazil.
458. Cyanthus rubineus. (L.) ♂. ♀. *Ruby-throated Humming-bird.* Brazil.
459. Cyanthus leucogaster? (Jardine.) Brazil.
460. Phœthornis eurynomus. (Less.) *Scaly-backed Humming-bird.* Brazil.
461. Phœthornis hirsutus. (L.) *Hairy-legged Humming-bird.* Brazil.
462. Phœthornis rufigaster. (Temm.) *Red-bellied Humming-bird.* Brazil.
463. Phœthornis Braziliensis. (Latham.) *Rufous-bellied Humming-bird.* Brazil.
464. Phœthornis Swainsonii. (Less.) *Swainson's Humming-bird.* Brazil.
465. Ramphodon nævius. (Less.) *Spotted Saw-bill Humming-bird.* Brazil.
466. Ramphodon. (Undetermined.) *Saw-bill Humming-bird.* Brazil.
467. Lampornis gramineus. (Latham.) *Black-breasted Humming-bird.* Brazil.
468. Lampornis niger. (Sw.) *Black Humming-bird.* Brazil.
469. Lampornis Buffonii. (Less.) *Buffon's Humming-bird.* Brazil.
470. Lampornis. (Undetermined.) Brazil.

PARADISIADÆ.

471. Ptiloris paradiseus. (Sw.) *Rifle-bird.* Moreton Bay, New South Wales.
472. Paradisea apoda. (L.)
473. Paradisea magnifica.

} Obtained in the shops of Singapore.

MEROPIDÆ.

474. Merops apiaster? (L.) *Bee-eater.* Cape of Good Hope.
475. Merops Javanicus. (Horsf.) Philippine Islands, Singapore.
476. Merops urica. (Sw.) *Pirik Bee-eater.* Mindanao.
477. Eurystomus Orientalis. (Latham.) *Oriental Roller.* Mindanao.
478. Eurystomus Australis. (Sw.) *Dollar-bird.* New South Wales.

HALCYONIDÆ.

479. Dacelo gigantea. (Latham.) *Laughing Jackass.* New South Wales.
480. Dacelo erythrorhyncha. (Gould.) Cape de Verde Islands.
481. Dacelo nullitorquis. (Peale.) Tahiti.
482. Dacelo albifrons. (Peale.) Bay of Islands, New Zealand.
483. Dacelo Vitiensis. (Peale.) Feejee and Tonga Islands.
484. Dacelo coronata. (Peale.) Samoan Islands.
485. Dacelo minima. (Peale.) Samoan Islands.
486. Dacelo collaris. (Vig. and Horsf.) New South Wales.
487. Dacelo atricapilla. (Latham.) Singapore.
488. Alcedo alcyon. (L.) *Belted King-fisher.* Oregon and California.
489. Alcedo Americana. (Latham.) ♂. ♀. *White-and-green King-fisher.* Brazil.
490. Alcedo Meninting. (Horsf.) *Meninting King-fisher.* Malacca.
491. Alcedo Capensis? (Lath.) *Gurial King-fisher.* (Lath.) Malacca.
492. Alcedo cristata? (Latham.) *Crested King-fisher.* Cape of Good Hope.

TROGONIDÆ.

493. Harpactes Condea. (Temm.) ♂. ♀. Malacca.
494. Harpactes Kasumba. (Raff.) ♂. ♀. Malacca.
495. Harpactes rodiosternus. (Peale.) Mindanao.
496. Trogon viridis. (L.) ♂. ♀. Brazil.

497. Trogon strigilatus. (Temm.) Brazil.
498. Trogon purpuratus. (Sw.) Brazil.
499. Trogon auratus. (Sw.) Brazil.

CAPRIMULGIDÆ.

500. Podargus cornutus. (Horsf.) Malacca.
501. Podargus humeralis. (Vig. and Horsf.) *More-pork.* New South Wales.
502. Nyctibius grandis. (Vieill.) Brazil.
503. Caprimulgus. (Undetermined.) Brazil.
504. Caprimulgus bimaculata. (Peale.) Malacca.
505. Caprimulgus macrurus. (Horsf.) Malacca.
506. Caprimulgus albicollis. (Latham.) Brazil.
507. Caprimulgus contermina. (Peale.) Chili.
508. Caprimulgus semitorquatus? (Latham.) Brazil.
509. Caprimulgus æquicauda. (Peale.) Peru.
510. Caprimulgus Nuttallii. (Audubon.) Oregon.
511. Chordeiles Peruvianus. (Peale.) Peru.

HIRUNDINIDÆ.

512. Hirundo jugularis. (Pr. Max.) Brazil.
513. Hirundo rufocollaris. (Peale.) Peru.
514. Hirundo cyanoleuca. (Vieill.) Peru.
515. Hirundo nigricans. (Vieill.) New South Wales.
516. Hirundo minuta. (Pr. Max.) Brazil.
517. Hirundo rustica. (L.) Taken at sea, latitude 11° 19′ 54″ N., longitude 24° 13′ 30″ W.
518. Hirundo rustica. Taken at sea, latitude 6° 50′ N., longitude 21° 38′ W.
519. Macropteryx leucophæa. (Peale.) Tahiti.
520. Macropteryx spodiopygia. (Peale.) Samoan and Feejee Islands.
521. Cypselus gutturalis. (Vieill.) Cape of Good Hope.
522. Cypselus collaris. (Pr. Max.) Peru.

PAVONIDÆ.

523. Argus giganteus. (Temm.) ♂. ♀. *Argus Pheasant.* Malacca.
524. Polyplectron chinguis. (Temm.) ♂. ♀. *Peacock Pheasant.* Malacca.
525. Phasianus erythropthalmus. (Raff.) *Rufous-tailed Pheasant.* (Latham.) Malacca.
526. Gallus Bankiva. (Temm.) *Jungle-fowl.* Malacca.
527. Gallus Bankiva? *Jungle-fowl.* Tahiti.
528. Cryptonyx coronatus. (Temm.) *Crowned Partridge.* Malacca.
529. Cryptonyx niger. (Jardine.) Malacca.
530. Tetrao umbellus. (L.) *Ruffed Grouse.* Oregon.
531. Tetrao obscurus. (Say.) *Dusky Grouse.* Oregon.
532. Tetrao urophasianus. (Bon.) *Cock of the Plains.* Oregon.
533. Perdix Capensis. (Latham.) ♂. ♀. *Cape Partridge.* Cape of Good Hope.
534. Perdix Afra. (Latham.) ♂. ♀. *African Partridge.* Cape of Good Hope.
535. Perdix Guianensis. (Latham.) *Guiana Partridge.* Brazil.
536. Perdix Californica. (Latham.) ♂. ♀. *Californian Partridge.* California.
537. Coturnix textilis. (Temm.) *Black-throated Quail.* New South Wales.
538. Coturnix Australis. (Latham.) *Australian Quail.* New South Wales.
539. Coturnix major. (Briss.) *Quail.* Cape de Verde Islands.
540. Coturnix Manillensis? (Latham.) *Manilla Quail.* Malacca.
541. Hemipodius varia. (Latham.) ♂. ♀. *Little Quail.* New South Wales.
542. Hemipodius pugnax. (Temm.) *Fighting Quail.* Malacca.
543. Ortyx plumifera. (Gould.) *Plumed Partridge.* Oregon.
544. Nothurus major. (Wagl.) *Patagonian Partridge.* Rio Negro, Patagonia.

STRUTHIONIDÆ.

545. Otis Australis. ♂. ♀. *New Holland Bustard.* New South Wales.
546. Struthio camelus. (L.) *African Ostrich.* (Skeleton.) Cape of Good Hope.
547. Rhea Americana. (Latham.) *South American Ostrich.* (Scull.) Patagonia.

COLUMBIDÆ.

548. Ptilinopus jambos. (Latham.) *Jamboo Pigeon.* Malacca.
549. Ptilinopus purpuratus. (Such.) *Purple-crowned Pigeon.* New South Wales.
550. Ptilinopus fasciatus. (Peale.) *Samoan Dove.* Samoan Islands.
551. Ptilinopus Perousii. (Peale.) *La Pérouse's Dove.* Feejee and Samoan Islands.
552. Ptilinopus coralensis. (Peale.) *Coral Island Dove.* Paumotu Islands.
553. Ptilinopus furcatus. (Peale.) *Tahitian Dove.* Tahiti.
554. Vinago vernans. (Latham.) *Parrot Pigeon.* Malacca.
555. Vinago Capellei. (Temm.) Malacca.
556. Vinago olax? (Temm.) Malacca.
557. Didunculus strigirostris. (Peale.) *Manu-mea.* Samoan Islands.
558. Columba dilopha. (Temm.) *Double-crested Pigeon.* New South Wales.
559. Columba castaneoceps. (Peale.) *Chestnut-head Pigeon.* Samoan Islands.
560. Columba Vitiensis. (Quoy and Gaimard.) *Feejee Pigeon.* Feejee Islands.
561. Columba chalcoptera. (Latham.) *Bronze-winged Pigeon.* New South Wales.
562. Columba fasciata. (Say.) *Band-tailed Pigeon.* Oregon.
563. Columba Araucana. (Less.) *Chilian Pigeon.* Chili.
564. Columba meridionalis. (King.) *Southern Pigeon.* Patagonia.
565. Columba cæruleocephala. (Lath.) *Blue-crowned Turtle.* Malacca.

566. Columba humeralis. (Temm.) *Speckled Dove.* New South Wales.
567. Columba Suratensis. (Lath.) *Surat Turtle.* Malacca.
568. Columba armilaris. (Temm.) *Pied Pigeon.* New South Wales.
569. Columba ♂. ♀. (Undetermined.) Brazil.
570. Columba. (Undetermined.) New South Wales.
571. Ectopistes Carolinensis. (L.) *Turtle Dove.* Oregon.
572. Carpophaga spadicea. (Latham.) *Chestnut-shouldered Pigeon.* New Zealand.
573. Carpophaga magnifica. (Temm.) *Green Pigeon.* New South Wales.
574. Carpophaga Oceanica. (Less.) *Oceanic Pigeon.* Samoan Islands.
575. Carpophaga ænea. (Latham.) *Nutmeg Pigeon.* Philippine and Sooloo Islands.
576. Carpophaga Auroræ. (Peale.) *Aurora Pigeon.* Maitea Island.
577. Carpophaga Wilkesii. (Peale.) *Wilkes's Pigeon.* Tahiti and Maitea.
578. Carpophaga latrans. (Peale.) *Barking Pigeon.* Feejee Islands.
579. Carpophaga casta. (Peale.) *Chaste Pigeon.* Sooloo Islands.
580. Peristera pectoralis. (Peale.) *Tawny-breast Dove.* Paumotu Islands.
581. Chæmepelia minuta. (Latham.) *Passerine Turtle.* Peru.
582. Geophilus Nicobaricus. (Lath.) *Nicobar Pigeon.* Mangsi.

MEGAPODINÆ.

583. Menura Novæ-Hollandiæ. (Latham.) *Lyre-tail.* New South Wales.
584. Alectura Lathami. *Native Turkey.* New South Wales.

ARDEADÆ.

585. Grus Canadensis. (Forst.) *Sand-hill Crane.* Oregon.
586. Grus sp. *Australasian Crane.* (Lath.) New South Wales.
587. Mycteria Americana. (Latham.) *Jabiru.* Brazil.
588. Hæmatopus palliatus. (Temm.) *Oyster-catcher.* Brazil, Peru.

589. Hæmatopus ater. (Vieill.) *Black Oyster-catcher.* Tierra del Fuego.
590. Hæmatopus Bachmanii. (Audubon.) *Bachman's Oyster-catcher.* Oregon.
591. Ardea Herodias. (L.) *Great Heron.* Oregon.
592. Ardea Novæ-Hollandiæ. (Latham.) *White-fronted Heron.* New South Wales.
593. Ardea sacra. (Latham.) *Sacred Heron.* Paumotu Islands, Society Islands, Friendly, Samoan, and Feejee Islands.
594. Ardea patruela. (Peale.) *Tahitian Green-Heron.* Tahiti.
595. Ardea lepidus? (Horsfield.) Malacca.
596. Ardea. (Sp. undetermined.) New South Wales.
597. Ardea candidissima. (L.) *Snowy Heron.* Peru.
598. Ardea candidissima? New South Wales.
599. Nycticorax Americanus? (Bon.) *Night-Heron.* Chili.
600. Nycticorax Caledonica. (Lath.) *Nankeen Crane.* New South Wales.
601. Platalea sp. *Yellow-bill Spoon-bill.* New South Wales.
602. Platalea sp. *Black-bill Spoon-bill.* New South Wales.

TANTALIDÆ.

603. Ibis religiosa? New South Wales.
604. Ibis sp. *New Holland Ibis.* (Latham.) New South Wales.
605. Ibis falcinellus. (L.) *Bay Ibis.* Oregon.
606. Ibis falcinellus? *Bay Ibis.* Chili.
607. Ibis brevirostris. (Peale.) *Short-billed Ibis.* Peru.

RALLIDÆ.

608. Parra Jacana. (L.) *Spur-wing Jacana.* Brazil.
609. Porphyrio melanotus. (Temm.) *Black-backed Sultana.* New South Wales.
610. Porphyrio Samoënsis. (Peale.) *Samoan Sultana.* Samoan Islands.
611. Porphyrio Vitiensis. (Peale.) *Feejee Sultana.* Feejee Islands.
612. Fulica alai. (Peale.) *Hawaiian Coot.* Sandwich Islands.

613. Rallus gularis. (Horsf.) *Gular Rail.* Malacca.
615. Rallus Sumatranus. (Raff.) *Sumatran Rail.* Malacca.
616. Rallus fuscus. (L.) *Brown Rail.* Malacca.
617. Rallus fasciatus. (Raff.) *Fasciated Rail.* Malacca.
618. Rallus Philippinus. (L.) *Philippine Rail.* New South Wales.
619. Rallus Philippinus? Feejee and Samoan Islands.
620. Rallus nigricans. (Vieill.) Brazil.
621. Rallus lurida. (Peale.) *Lurid Rail.* Tierra del Fuego.
622. Zapornia spilinota. (Gould.) Feejee Islands.

SCOLOPACIDÆ.

623. Rynchæa semicollaris. (Vieill.) Chili.
624. Scolopax Braziliensis. (Sw.) Brazil.
625. Scolopax Magellanicus. (King.) *Magellanic Snipe.* Tierra del Fuego.
626. Scolopax meridionalis. (Peale.) *Southern Snipe.* Tierra del Fuego.
627. Scolopax Holmesii. (Peale.) *Holmes's Snipe.* Auckland Islands.
628. Scolopax Australis. (Latham.) *New Holland Snipe.* New South Wales.
629. Scolopax pectinicauda. (Peale.) *Comb-tailed Snipe.* Malacca.
630. Limosa Foxii. (Peale.) *Fox's Godwit.* Samoan Islands.
631. Numenius Hudsonicus. (Latham.) *Hudsonian Curlew.* Peru.
632. Numenius longirostris. (Wils.) *Long-billed Curlew.* Oregon.
633. Numenius femoralis. (Peale.) *Hairy-legged Curlew.* Paumotu Islands.
634. Phalaropus hyperboreus. (Latham.) *Hyperborean Phalarope.* Oregon.
635. Himantopus sp. *Stilt Plover.* New South Wales.
636. Recurvirostra sp. New South Wales.
637. Totanus tenuirostris. (Horsf.) *Slender-billed Sandpiper.* Malacca.
638. Totanus sp. New South Wales.
639. Totanus Polynesiæ. (Peale.) *Polynesian Sandpiper.* Paumotu, Society, Samoan, and Feejee Islands.
640. Tringa parvirostris. (Peale.) *Small-billed Sandpiper.* Paumotu Islands.

641. Tringa aurita. (Latham.) *Brown-eared Sandpiper.* New South Wales.
642. Strepsilas interpres. (L.) *Turnstone.* Peru and Feejee Islands.

CHARADRIADÆ.

643. Squatarola fusca. (Gould.) Tierra del Fuego.
644. Charadrius pluvialis. (L.) *Golden Plover.* Malacca, Samoan, Feejee, and Hawaiian Islands.
645. Charadrius nigrifrons. (Cuvier.) New South Wales.
646. Charadrius vociferus. (L.) *Killdee.* Peru.
647. Charadrius trifasciatus. (Wagl.) Patagonia.
648. Charadrius Vanelloides. (Peale.) New South Wales.
649. Vanellus lobata. (Latham.) *Wattled Lapwing.* New South Wales.
650. Vanellus Cayanus. (Latham.) *Cayenne Plover.* Patagonia and Chili.
651. Vanellus Helveticus. (L.) *Black-bellied Plover.* California.
652. Œdicnemus longipes. *Long-legged Plover.* New South Wales.
653. Œdicnemus magnirostris. (Temm.) *Large-billed Plover.* Mindanao and Mangsi.
654. Glareola cuneicauda. (Peale.) *Wedge-tailed Pratincole.* Peru.

NATATORES.

ANATIDÆ.

655. Phœnicopterus Chilensis. (Lath.) *Chili Flamingo.* Valparaiso.
656. Cygnus atratus. (L.) *Black Swan.*
657. Anser Antarctica. (Gm.) ♂. ♀. *Antarctic Goose.* Tierra del Fuego.
658. Anser Magellanica. (Gm.) *Bustard Goose.* Tierra del Fuego.
659. Anser picta. (Latham.) *Painted Goose.* Tierra del Fuego.
660. Anser melanopterus. (Eyton.) Valparaiso.
661. Anser hyperboreus. (L.) *Snow Goose.* California.
662. Anser albifrons. (Penn.) *Laughing Goose.* California.
663. Anser Hawaiënsis. (Peale.) *Hawaiian Goose.* Sandwich Islands.
664. Anser sp. *Pigmy Goose.* New South Wales.
665. Micropterus brachypterus. (Eyton.) *Steamer, or Logger-head Goose.* Tierra del Fuego.
666. Anas tadornoides. (Jard.) *Shieldrake.* New South Wales.
667. Anas jubata. (Lath.) *Hawkesbury Duck.* New South Wales.
668. Anas arcuata. (Horsf.) *Arched Duck.* Malacca.
669. Anas viduata. (L.) *Spanish Duck.* Brazil.
670. Anas rufitorques. (Bon.) ♂. ♀. *Ring-necked Duck.* Oregon.
671. Anas superciliosa? (Latham.) *Supercilious Duck.* New South Wales, New Zealand, Tongatabu, Samoan Islands, and Tahiti.
672. Anas sp. *White-wing Diver.* New South Wales.
673. Anas virgatas? (Pr. Max.) Brazil.
674. Anas Americana. *Widgeon.* Oregon.
675. Anas crecca. (Carolinus, Aud.) *Green-wing Teal.* Oregon.
676. Anas creccoides. (King.) Tierra del Fuego.
677. Anas sp. (Resembling creccoides!) Argyle, New South Wales.
678. Anas Boschas. (L.) *Mallard.* Oregon.
679. Anas sp. *Brown Duck.* New South Wales.
680. Anas specularioides. (King.) Tierra del Fuego.

681. Rhynchaspis fasciata. (Shaw.) *New Holland Shoveler.* New South Wales.
682. Rhynchaspis clypeata. (L.) *American Shoveler.* Oregon.
683. Oidemia perspicillata. (L.) ♂. ♀. *Surf Duck.* Oregon.
684. Oidemia fusca. (L.) *Velvet Duck.* Oregon.
685. Mergus cucullatus. (L.) *Hooded Merganser.* Oregon.

COLYMBIDÆ.

686. Podiceps auritus. (Latham.) *Eared Grebe.* Oregon.

ALCADÆ.

687. Uria Grylle. (L.) *Black Guillemot.* Oregon.
688. Uria antiqua. (Gm.) *Black-throated Guillemot.* Oregon.
689. Mormon cirratus. (Latham.) *Tufted Puffin.* Oregon.
690. Chimerina cornuta. Oregon.
691. Aptenodytes Patachonica. (Latham.) *Patagonian Penguin.* Antarctic Icy Barrier.
692. Aptenodytes Magellanica. (Lath.) *Magellanic Penguin.* Tierra del Fuego.
693. Aptenodytes chrysocome? (Latham.) *Crested Penguin.* Tierra del Fuego.
694. Aptenodytes minor. (Lath.) *Corrora.* Bay of Islands, New Zealand.
695. Aptenodytes flavilarvatus. (Peale.) *Yellow-masked Penguin.* Auckland Islands.
696. Aptenodytes longicaudatus. (Peale.) *Long-tailed Penguin.* Antarctic Icebergs.
697. Aptenodytes tæniatus. (Peale.) *White-cockade Penguin.* Macquarie's Island.
698. Aptenodytes magnirostris. (Peale.) *Large-billed Penguin.* Tierra del Fuego.

PELICANIDÆ.

699. Plotus. *New Holland Darter.* (Lath.) New South Wales.
700. Tachypetes aquilus. (Vieill.) *Frigate-bird.* Paumotu Islands.
701. Carbo niger. (King.) *Black Cormorant.* Tierra del Fuego.
702. Carbo Magellanicus. (Latham.) *Magellanic Cormorant.* Tierra del Fuego.
703. Carbo carunculatus. (Gm.) *Carunculated Cormorant.* Tierra del Fuego.
704. Carbo carunculatus? (Young?) *Carunculated Cormorant.* Tierra del Fuego.
705. Carbo varius. (L.) *Pied Cormorant.* New Zealand.
706. Carbo purpuragula. (Peale.) *Purple-throated Cormorant.* New Zealand.
707. Carbo flavagula. (Peale.) *Yellow-throated Cormorant.* New Zealand.
708. Carbo fucosus. (Peale.) *Painted Cormorant.* New Zealand.
709. Carbo Gaimardii. (Garnot.) *Gaimard's Cormorant.* Peru.
710. Carbo sp. Valparaiso.
711. Carbo sp. Valparaiso.
712. Carbo sp. New South Wales.
713. Sula fusca. (Briss.) *Brown Booby.* Bellinghausen Island.
714. Sula fusca. *Young Brown Booby.* Bellinghausen Island.
715. Sula piscator. (Latham.) ♂. ♀. Eggs and young. *Lesser Gannet.* Paumotu Islands.
716. Sula rubripeda. (Peale.) ♂. ♀. Eggs and young. *Red-footed Gannet.* Honden and Wake's Islands.
717. Pelicanus fuscus. (Latham.) *Brown Pelican.* Oregon.
718. Pelicanus trachyrhynchos. (Latham.) *Rough-billed Pelican.* Oregon.
719. Pelicanus Javanicus. (Horsf.) *Javan Pelican.* Singapore.
720. Pelicanus perspicillatus. (Temminck.) *New Holland Pelican.* (Latham.) Moreton Bay, New South Wales.
721. Sterna fuliginosa. (Gm.) ♂. ♀. Eggs and young. *Sooty Tern.* Paumotu Islands.
722. Sterna Inca. (Less.) *Inca's Tern.* Peru.

723. Sterna cristata. (Latham.) *Crested Tern.* Peru?
724. Sterna alba. (Latham.) *White Tern.* Paumotu Islands.
725. Sterna lunata. (Peale.) *Lunate Tern.* Paumotu Islands.
726. Sterna Antarctica. (Peale.) *Antarctic Tern.* Tierra del Fuego.
727. Sterna albifrons. (Peale.) *White-fronted Tern.* New Zealand.
728. Sterna rectirostris. (Peale.) *Straight-billed Tern.* Feejee Islands.
729. Megalopterus stolida. (Gm.) *Noddy.* Atlantic and Pacific Oceans.
730. Megalopterus tenuirostris. (Temm.) *Long-billed Noddy.* Paumotu Islands.
731. Megalopterus plumbea. (Peale.) *Lead-coloured Noddy.* Paumotu Islands.
732. Phaeton phœnicurus. (Latham.) ♂. ♀. Eggs and young. *Red-tailed Tropic-bird.* Paumotu and Samoan Islands.
733. Phaeton æthereus. (L.) *Tropic-bird.* Samoan Islands.
734. Rhynchops nigra. *Black Skimmer.* Peru?
735. Larus Dominicanus. (Licht.) ♂. ♀. and young. Valparaiso.
736. Larus hæmatorhynchus. (King.) ♂. ♀. and young. *Red-billed Gull.* Peru, and Orange Bay, Tierra del Fuego.
737. Larus albipennis. (Peale.) *White-quilled Gull.* Valparaiso.
738. Larus argentatus. (Brunn.) *Herring Gull.* Oregon.
739. Larus zonorhynchus. (Richardson.) *Ring-billed Gull.* Oregon.
740. Larus cirrocephalum. (Vieill.) Peru.
741. Lestris catarractes. (L.) *Port Egmont Hen.* Tierra del Fuego.
742. Diomedea exulans. (L.) *Wandering Albatross.* South Pacific Ocean.
743. Diomedea chlororhynchos. (Latham.) *Yellow-nosed Albatross.* South Pacific Ocean.
744. Diomedea fuliginosa. (Latham.) *Sooty Albatross.* South Pacific Ocean.
745. Diomedea brachyura. (Less.) *Short-tailed Albatross.* North Pacific Ocean.
746. Thalassidroma furcata. (Hinds.) Northwest Coast of America.
747. Thalassidroma lineata. (Peale.) *White-lined Petrel.* Samoan Islands.
748. Thalassidroma Wilsonii. (Bonn.) *Wilson's Petrel.* East Atlantic Ocean.
749. Thalassidroma Wilsonii. *Wilson's Petrel.* South Pacific Ocean.
750. Procellaria brevipes. (Peale.) *Short-footed Petrel.* Antarctic Ocean.

751. Procellaria nivea? (Latham.) *Snowy Petrel.* Antarctic Ice.
752. Procellaria parvirostris. (Peale.) *Small-billed Petrel.* Paumotu Islands.
753. Procellaria rostratus. (Peale.) *Large-billed Petrel.* Tahiti.
754. Procellaria gularis. (Peale.) *White-throated Petrel.* Antarctic Ocean.
755. Procellaria gigantea. (Latham.) *Giant Petrel.* Cape Horn.
756. Procellaria Capensis. (L.) *Pintado Petrel.* South Atlantic and South Pacific Oceans.
757. Procellaria glacialoïdes. (Smith.) P. gelida? (Gm. Latham.) South Pacific Ocean.
758. Procellaria glacialis. (L.) *Pulmar Petrel.* Coast of Oregon.
759. Procellaria Antarctica. (Gm.) *Antarctic Petrel.* Antarctic Ocean.
760. Puffinus cinereus. (Steph.) *White-faced Petrel?* (Latham.) Tierra del Fuego.
761. Puffinuria Garnotii. (Less.) *Diving Petrel.* Peru.
762. Prion cærulea. (Less.) Coasts of Patagonia and Tierra del Fuego.

THE END.

Book taken apart. All leaves deacidified. Laminated with cellulose acetate and tissue. Leaves hinged with japanese Usugami tissue. Resewed with all-rag end papers, unbleached linen hinges, hand-sewn head-bands. Rebound in Russell's oasis morocco. Old leather sides and spine decoration re-used. Titled to match rubbing of original binding.

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